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ONE *of the earliest letters received from England after the appearance of the first issue of* THE AMERICAN NEPTUNE *in* 1941 *was from Captain W. R. Chaplin, one of the Elder Brethren of the ancient corporation of Trinity House. The Editors' pleasure in receiving Captain Chaplin's friendly good wishes for the success of the new journal was tempered by the news that Trinity House on Tower Hill had been burned only a few days before in the German air attack on London of the night of* 30-31 *December* 1940, *and that the ship models and records of the corporation, extending back to its foundation in the sixteenth century, had been destroyed. Some time after this Captain Chaplin secured photographs of the Trinity House models of the* Loyal London *of* 1666 *and four early light-vessels from negatives that had been made some years ago by* Country Life *and the Science Museum, and forwarded them to the* NEPTUNE, *but unfortunately they, and the accompanying description, were lost at sea. Upon learning this, Captain Chaplin very kindly went to the trouble of procuring a duplicate set of the photographs, which arrived safely last summer and are reproduced in the leading article of this issue.*

The war-time duties of naval architects have naturally greatly reduced the supply of lines and sail plans that are available for publication. The Editors are therefore particularly grateful to Mr. Nevitt and Major Chapelle for the extensive drawings of one of William H. Webb's steamships and of Chesapeake Bay skipjacks that accompany their articles.

The Editors regret that delays in the production of the collotype illustrations, due to heavy Army and Navy orders at the Meriden Gravure Company, have caused this and preceding issues to be several weeks late in distribution. It is trusted that the readers will realize that this lack of punctuality, like the decrease in number of pages due to paper restrictions, is temporary and inevitable, and that they will continue to assist the Editors by renewing their subscriptions for 1945 *as promptly as in preceding years.*

An index to the fourth volume appears at the end of this issue, together with a general title-page and table of contents for the volume. Subscribers wishing to have the standard blue buckram binding may send their copies of Volume IV to Mr. Marchi's bindery at 105 *Middle Street, Portland* 6, *Maine.*

The Trinity House Ship Models

BY W. R. CHAPLIN

WHEN the Trinity House was destroyed in the heavy raid on London on the night of 30-31 December 1940, the Corporation's losses included a number of ship models of more than passing interest.[1] Of these, a model of a three-decker was the most valued, both on account of its age and the quality of the workmanship. The model in question was of the *Loyal London*, of 1666 (Plates 41-44), and had always been an object of considerable interest to enthusiasts in ship models of the seventeenth century.[2] It also had the further interest of having been in the possession of the Trinity House for over two hundred and sixty years, and the acquisition of it is still on record in a brief entry in their minute books of 1672 'That Sir Jeremy Smyth would speak to Mr Shish for a model.'

Jonas Shish, born in 1605, was one of a family who had been master shipwright at Deptford and elsewhere on the Thames-side for over a hundred years. In 1668 he succeeded Christopher Pett as master shipwright at Deptford dockyard, Pett having died in March of that year. Shish died in May 1680 and was buried at St. Nicholas Church, Deptford, where also were buried so many of the famous shipbuilders of the Thames-side in the seventeenth century.

Admiral Sir Jeremy Smyth, who had been elected to the Trinity House on 2 March 1671 and was master thereof 1673-1674, had commanded at various times three big ships, the *Royal Katherine*, *Loyal London*, and *Royal Sovereign*. None of these was built by Jonas Shish, but the *Loyal*

[1] The model of the *Loyal London* of 1666 had been photographed some twenty years ago by *Country Life*, and Plates 41-44 are reproduced from those photographs through the kindness of the Editors of that periodical. Photographs of the four light-ship models are reproduced (Plates 45-48) by permission of The Science Museum, South Kensington, London, where the models were repaired and photographed a few years before the war. The manuscript and illustrations of the present article, which were originally sent to the THE AMERICAN NEPTUNE in 1943, were lost en route. The safe arrival of a second copy was greatly facilitated by the kindness of Admiral H. R. Stark, U.S.N., and Captain Dudley W. Knox, U.S.N. (ret.).

[2] See Gregory Robinson and R. C. Anderson, 'The Identification of Models of Men-of-War—III,' *The Mariner's Mirror*, II (1912), 193-195.

London was built at Deptford by Captain John Taylor, for many years a master shipwright, and as Shish was now in charge of the dockyard he would be the natural person to whom to apply for a ship model, and equally natural that Sir Jeremy Smyth should be offered that of the ship he had formerly commanded.

The *Loyal London* was built to replace the *London* blown up off the Nore Sand at the entrance to the Thames, on 8 March 1665, with heavy loss of life as well as the loss of a valuable and much needed ship. The Lord Mayor and Aldermen of London at once resolved to replace her at the charge of the City, and a subscription list was immediately opened. Within two weeks the names of three master shipwrights, with their plans and prices were submitted to the King for his choice. The three were all eminent shipbuilders, Captain John Taylor of Wapping and Deptford, Mr. Henry Johnson of Blackwell, and Mr. William Castle of Rotherhithe and Deptford. The King took four days to decide, and the choice fell upon Captain Taylor, who had built the *London* recently lost.

Work began at once, but Captain Taylor was soon complaining that he was not getting the £500 a month advance which had been promised and was unable to pay his workmen. Before the end of the year the subscriptions had practically ceased, and in January 1666 the Lord Mayor, Sir Thomas Bludworth, issued a public letter to the citizens. The appeal was not received with much enthusiasm, and many who had promised large sums had not paid a penny; but there were reasons that went far to account for the cooling down of the ardour of the citizens. The plague in London had brought business in general to a standstill for the time being and money was scarce. The war with Holland, carelessly and ineffectively conducted, had resulted in the practical stoppage of the whole of the overseas trade to London, while the coasting trade had been rendered all but impossible owing to the Dutch privateers which swarmed all over the North Sea and English Channel, and were actually taking vessels within the Thames Estuary.

Further subscription lists were opened, but the total amount was only reached by borrowing, and by a sum paid out of the 'City Cashes'. Captain Taylor's estate, however, was not finally paid off until 1671, a year after he had died, and the *Loyal London's* accounts were not cleared and passed until October 1675, over eight years after the ship herself had ceased to exist.

The *Loyal London* was launched on 10 June 1666. John Evelyn was one of those present and records the event in his *Diary*: 'I saw the *London* frigate launched, a most stately ship, built by the City to supply that

Loyal London of 1666

Model owned by the Trinity House, Tower Hill, London, from 1672 until its destruction in the German air raid of 30-31 December 1940

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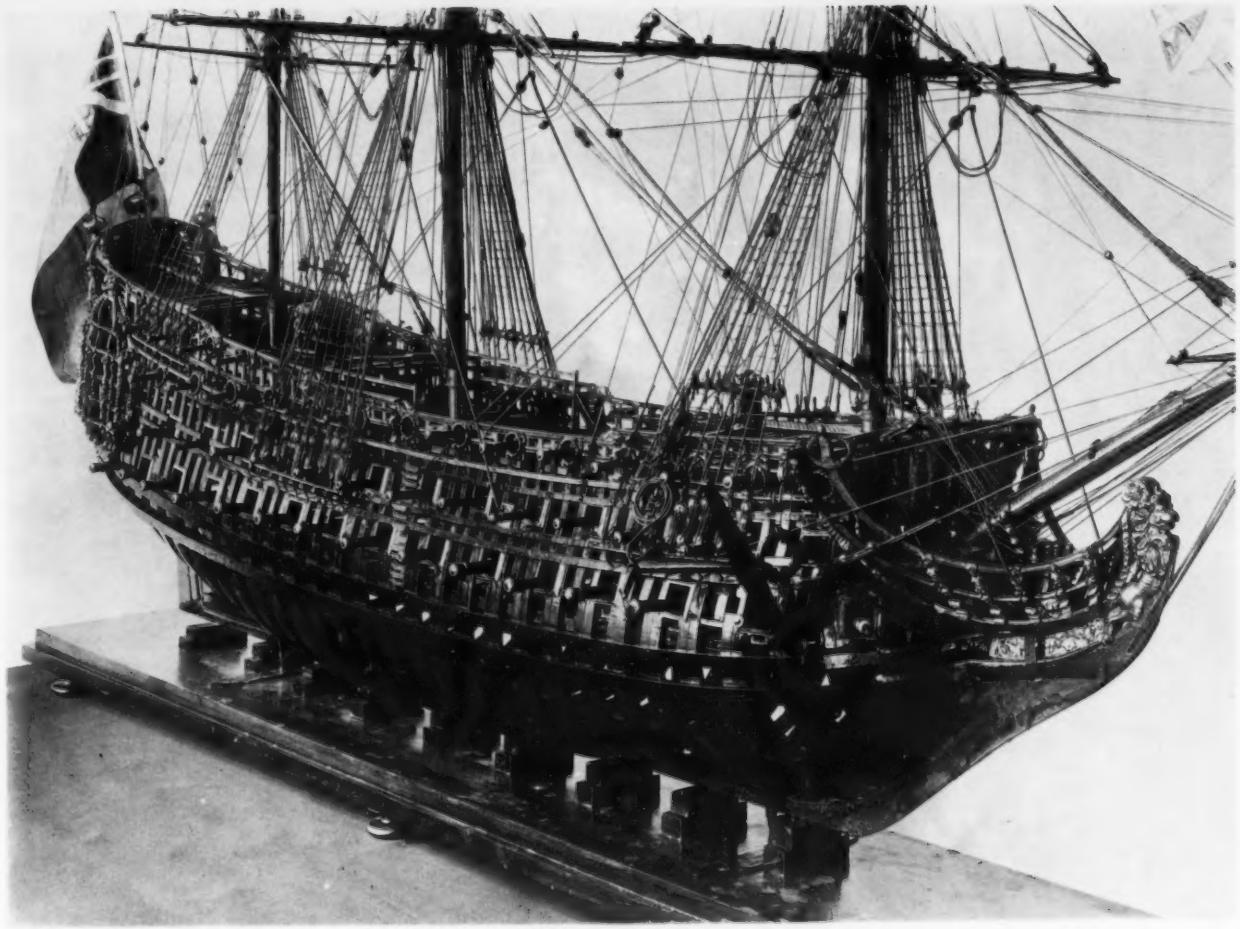

Loyal London of 1666

Model owned by the Trinity House, Tower Hill, London, from 1672 until its destruction in the German air raid of 30-31 December 1940

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which was burnt by accident some time since, the King, Lord Mayor and Sheriffs being there, with a great banquet.' It was the rule at that time to name a man-of-war after she had been launched; not, as now, at the time of launching. The ship was first got afloat and then she formally received her name. This was a ceremony by itself, a very stately affair, conducted with certain time-honoured observances which had been kept up practically ever since the time of Henry VIII. Even under the Commonwealth the old ceremony was generally continued in its main features.

The new ship afforded a contrast to her predecessor, the black-sided and unornamented *London* of the Commonwealth. The Restoration had brought back the old style of bright colouring and gilt, and carved ornamentation, which was not confined to the King's ships, and had even been carried to the New England colonies, where shipbuilding was still in its infancy. A carved lion rampant, gilded, with open jaws, and wearing a crown—the usual figure-head of all men-of-war of this period—decorated the bow, with the shield of the City arms on each side. At the stern was a carved representation of the Stuart arms, and the framework of the stern a mass of gilded brackets and mouldings, which are discernible in the photographs of the model.

The *Loyal London* joined the fleet at the Nore anchorage on 11 July. She was said to be an excellent ship, of good speed, and the fleet considered her as good a man-of-war as any in the world. Pepys described her as 'the best ship in the world.' With the flag of Sir Jeremy Smyth, Admiral of the Blue Squadron, she took part in the engagement with the Dutch fleet under Admiral De Ruyter on 25 July, mainly against the squadron under Admiral Tromp, who with four or five ships swept down on the *Loyal London* and made a desperate attempt to overpower and capture her. She was set on fire and partially dismasted, but her men stood to their guns and made a stubborn defence. Eventually the *Victory* and *Defiance* came to her assistance and the Dutch final attack on the *Loyal London* was beaten off.

During August she was with Admiral Sir Robert Holmes when his squadron raided the coast of Holland and destroyed the storehouses of the Dutch East India Company at Terschelling, together with their fleet of upwards of a hundred and sixty vessels. In September she had an engagement with two French men-of-war, which she beat off, but herself suffered considerable damage. At the break of the season, in October, when the fleet returned to Portsmouth and Chatham to lie up for the winter, the *Loyal London* went to the Medway and was there dismantled .

In February of the following year, 1667, the decision had been come to

at Whitehall not to fit out a fleet for the ensuing summer, and the larger ships remained in port and unrigged. Negotiations for peace were pending and there appeared to be no need to prepare a large fleet for sea. Negotiations at The Hague continued through the spring but no settlement was reached. The helpless situation of the English fleet now attracted the attention of the Dutch, who at once prepared to take advantage of such an unexpected opportunity and thereupon resolved that a major enterprise should be attempted in the form of a raid on the London naval base.

Every means was taken to keep secret their preparations but some rumour of the impending danger to the ships in the Medway reached London, and on the strength of it the Admiralty sent instructions to Chatham directing them to move the sixteen larger ships as high up the river as possible. At the same time a large iron chain was ordered to be made and stretched across the Medway to prevent the passage of hostile ships. Orders were also given to have the blockhouse fort at Sheerness put in order and additional fortifications raised along the riverside; however, little or nothing appears to have been done by the time the Dutch arrived.

The Dutch fleet of sixty ships under Admiral De Ruyter sailed for the Thames on 3 June and anchored in the Estuary on the seventh. On the tenth they attacked the fort at Sheerness, landed a force and took it without very serious resistance. On the following day they entered the Medway, but the channel being obstructed by block ships and the tide failing they gave over the attack for the time being.

By the morning of the twelfth they had found a passage deep enough for their ships to pass clear of the sunken block ships. De Ruyter thereupon sailed up the river, dislodged the chain and attacked the ships lying there, captured the *Royal Charles* as well as the *Santa Maria*, a ship that had formerly been taken from them. The *Royal Oak*, *Royal James*, and *Loyal London* had already been scuttled to prevent their capture, but the greater part of their topsides remained above water. De Ruyter, with a fire-ship, passed the *Royal Oak* and made straight for the *Loyal London*, the larger of the three sunken ships, set her on fire and she burned to the water's edge, thus ending her career a year and three days after her launching. Having accomplished what they set out to do the Dutch retired from the Medway.

The burned-out hull of the *Loyal London* was eventually raised and taken to Deptford dockyard where she was rebuilt into a third *London*, man-of-war, at a larger sum than it had cost to build the *Loyal London*, and was not launched again until June 1670. The citizens of London, impoverished by the loss of trade through the Plague, the Great Fire of 1666,

Loyal London of 1666

Model owned by the Trinity House, Tower Hill, London, from 1672 until its destruction in the German air raid of 30-31 December 1940

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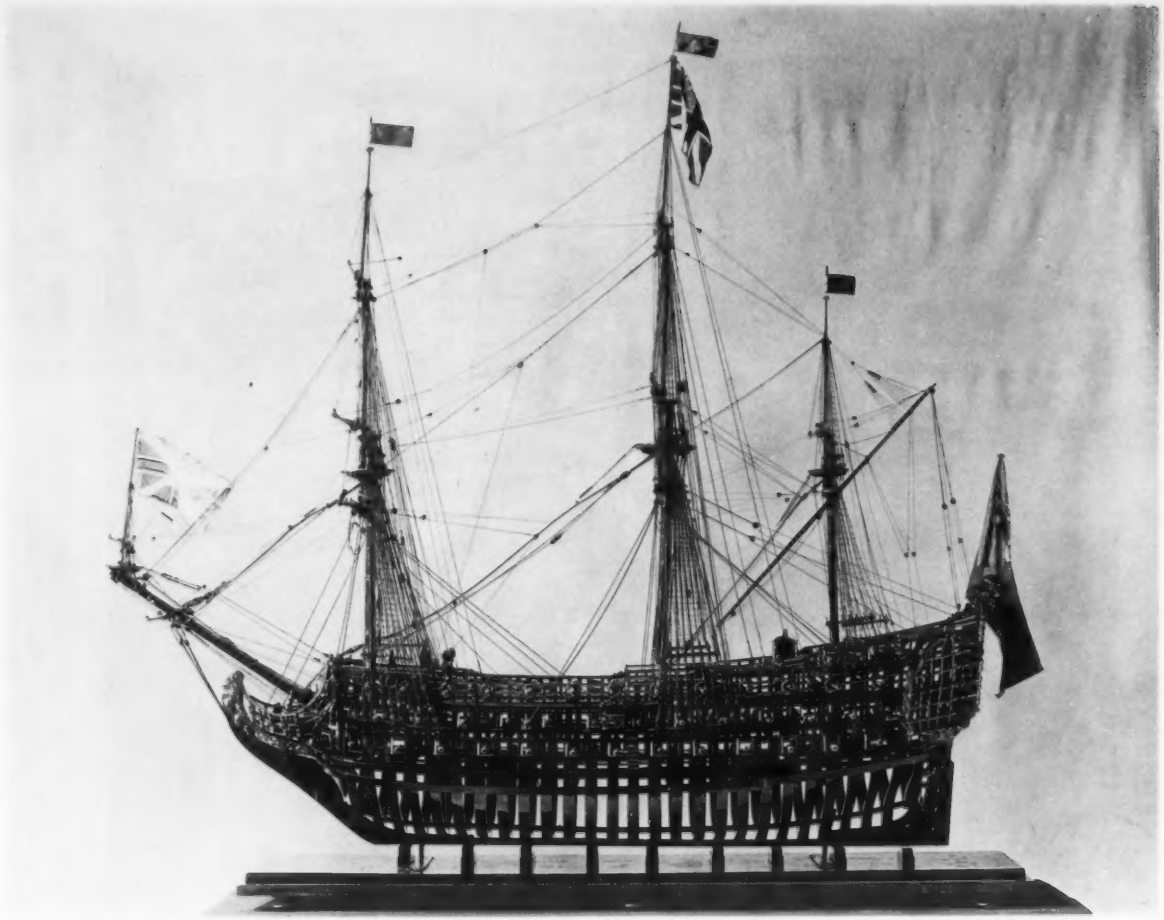

Loyal London of 1666

Model owned by the Trinity House, Tower Hill, London, from 1672 until its destruction in the German air raid of 30-31 December 1940

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Nore light vessel

Model owned by the Trinity House, Tower Hill, London, until its destruction in the German air raid of 30-31 December 1940

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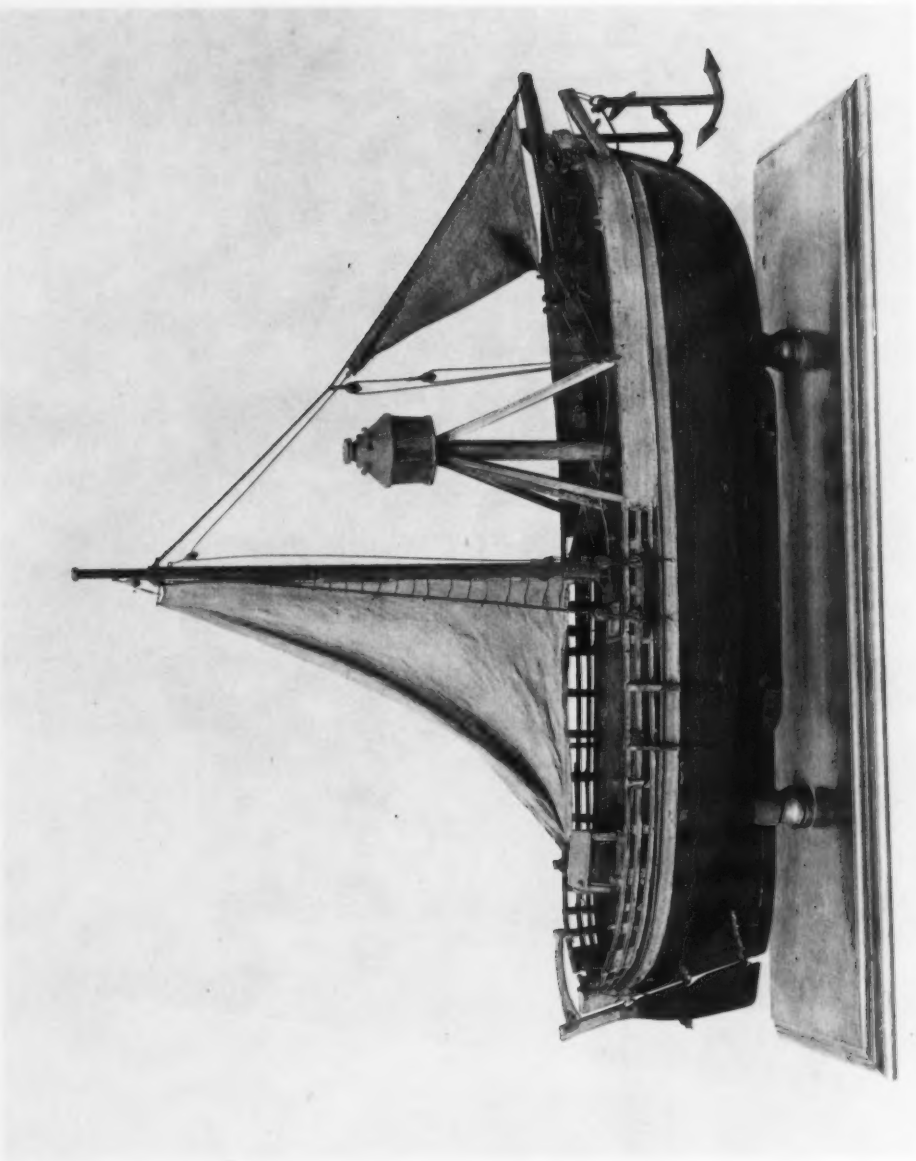


Eighteenth-century light vessel, either the *Dudgeon* of 1736 or the *Gwers* of 1788

Model owned by the Trinity House, Tower Hill, London, until its destruction in the German air raid of 30-31 December 1940

Reproduced by permission of the Science Museum, South Kensington, London

and their heavy losses at sea during the two years of war with Holland, and discouraged by the apathy with which the war had been conducted, were in no mind to raise a further subscription and ignored a suggestion that they should again replace the ship at the charge of the City. When it came to rename the ship, the King, it is said in a mood of pique, rejected the prefix *Loyal* and simply named her the *London*.

Other models were lost in the Trinity House of which no photographs or drawings remain, but reproductions have been preserved of the models of four early light-vessels (Plates 45-48). Although the workmanship in these was comparatively crude, they were of more than passing interest inasmuch that they were the only replicas of eighteenth-century light-vessels known to exist, and a link in the development of the floating sea-mark.

The first light-vessel to be established was at the Nore Sand, in the Thames Estuary, in 1732. This was a small merchant vessel of the period, fitted with a yard to her single mast and carrying at each yard-arm a lantern illuminated with candles; of her general appearance there is no record except a miniature engraving on a contemporary chart. Four years later a light-vessel was moored off the Dudgeon Shoal, off the coast of Norfolk, the first one to be placed in an exposed place. All the early light-vessels were small merchant ships, possibly chosen for their known riding qualities, but generally were too small for the condition of weather and sea to which they were exposed, and being dependent entirely on hempen cables for their ground tackle they were often adrift or damaged, and obliged to run for the nearest harbor. As a result, the stations were frequently left unmarked for several weeks before they could be repaired and sailed back to their assigned positions.

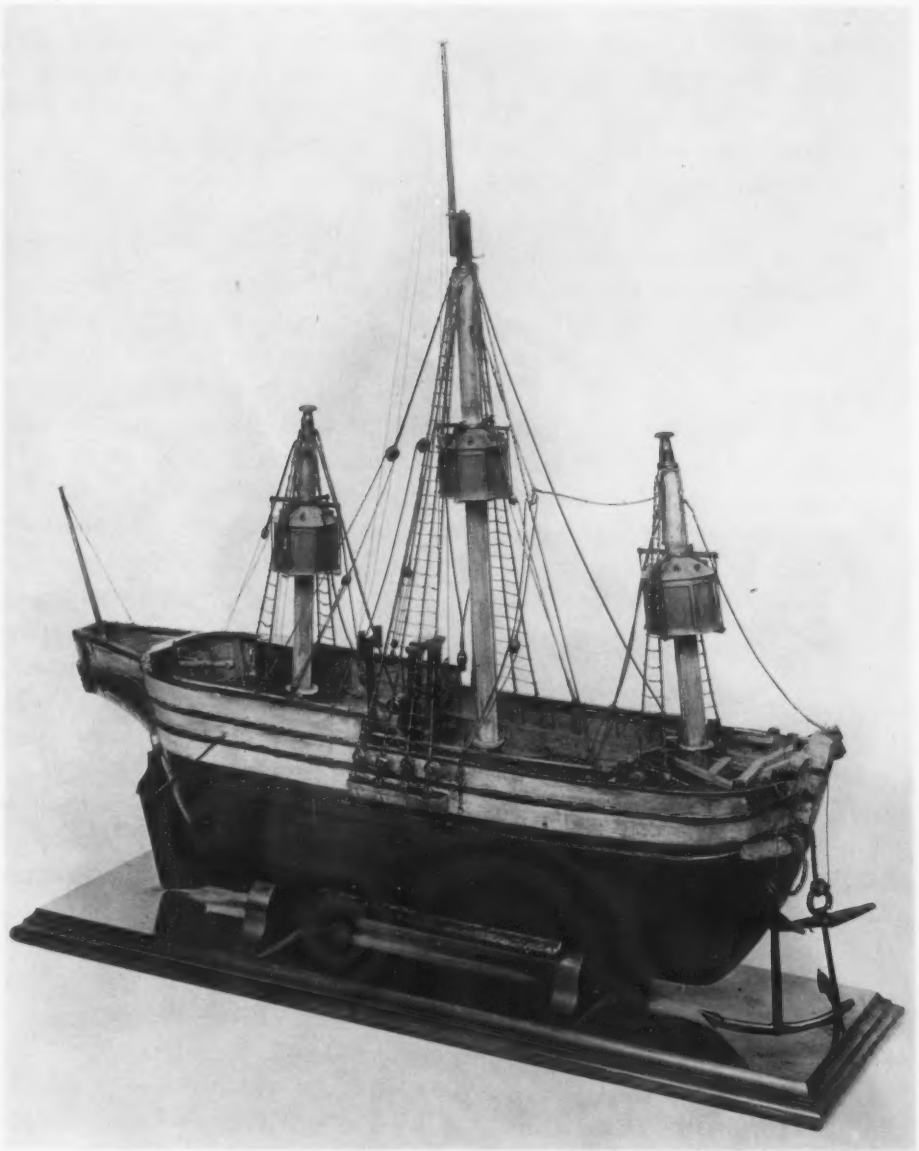
Despite the difficulties encountered in maintaining the Dudgeon station during the earliest years, when the lighthouse at the Eddystone Rocks, built by Rudyerd in 1708, was destroyed by fire in 1755, it was resolved to place a light-vessel to the westward of the rocks, pending the building of a new lighthouse, and a small brig was hired for the purpose. For four years she marked the danger whilst plans were being evolved and during the eventual building of Smeaton's famous lighthouse. However, exposed to the westerly gales and heavy seas of the winter months she had a hazardous time and often broke adrift or had to slip her moorings and run for harbour.

The next light-vessel to be established in an exposed position was off the Gwers Shoal, in the English Channel, in 1788. Here again the same difficulties were at first encountered in keeping her station during the

winter months; nevertheless much had been learnt from experience, and the degree of success was sufficient to justify an attempt to mark the Goodwin Sands in a similar manner in 1796. Some means of marking the Goodwin Sands had long exercised the minds of mariners and various attempts had been made to erect beacons, but always they were either washed away or swallowed up by the sands. However, the number of wrecks on the Goodwins as well as the use being made of the Downs anchorage by the squadrons engaged in hunting the French privateers during the war with France necessitated some means being found to mark the north end of the Sands, and in the above year a light-vessel was fitted out and moored there, carrying three lights on separate masts, the three lights being designed to distinguish the station from the North Foreland lighthouse, close by, and the two lighthouses at the South Foreland, at the southern entrance of the Downs anchorage.

When first placed on station the light-vessel was armed with two cannons, twelve cutlasses, and twelve boarding pikes to enable the crew to defend themselves against the French privateers. From her first journal, a bulky tome, formerly in the Corporation's library, which covered the first ten years following the establishment of the station, one learnt that the privateers often cruised round her, but there was no record of her ever having been attacked, and no doubt the French found her equally useful for determining their position. The journal also revealed much of interest concerning the daily life and hazards of the light-vessel men of that time, but this unfortunately has been lost. The ship was at first named the *Goodwin*, but in later years when the sands were marked by further light-vessels she became the *North Goodwin*, in order to distinguish her from the *South Goodwin* and *East Goodwin*. From 1796 the station had been continued without a break until 1940, when, following the bombing by German aircraft and sinking of several light-vessels, including the *East Goodwin*, the remaining vessels in the bombing areas were withdrawn from their stations.

The Nore light-vessel was taken over by the Trinity House from private owners, or lessees, in 1794, the sixty-one-year lease during which they had enjoyed the revenue from the dues levied on shipping having expired, and now put the station on their own establishment and placed a new vessel there. So far as can be gleaned from the brief contemporary record she was a Dutch-built vessel which had been captured from the French. Plate 45 depicts the *Nore* light of the period, but whether it is the vessel of just prior to 1794 or her successor is uncertain; however, it is unlikely that they differed very much.



Goodwin light vessel of 1796

Model owned by the Trinity House, Tower Hill, London, until its destruction in the German air raid of 30-31 December 1940

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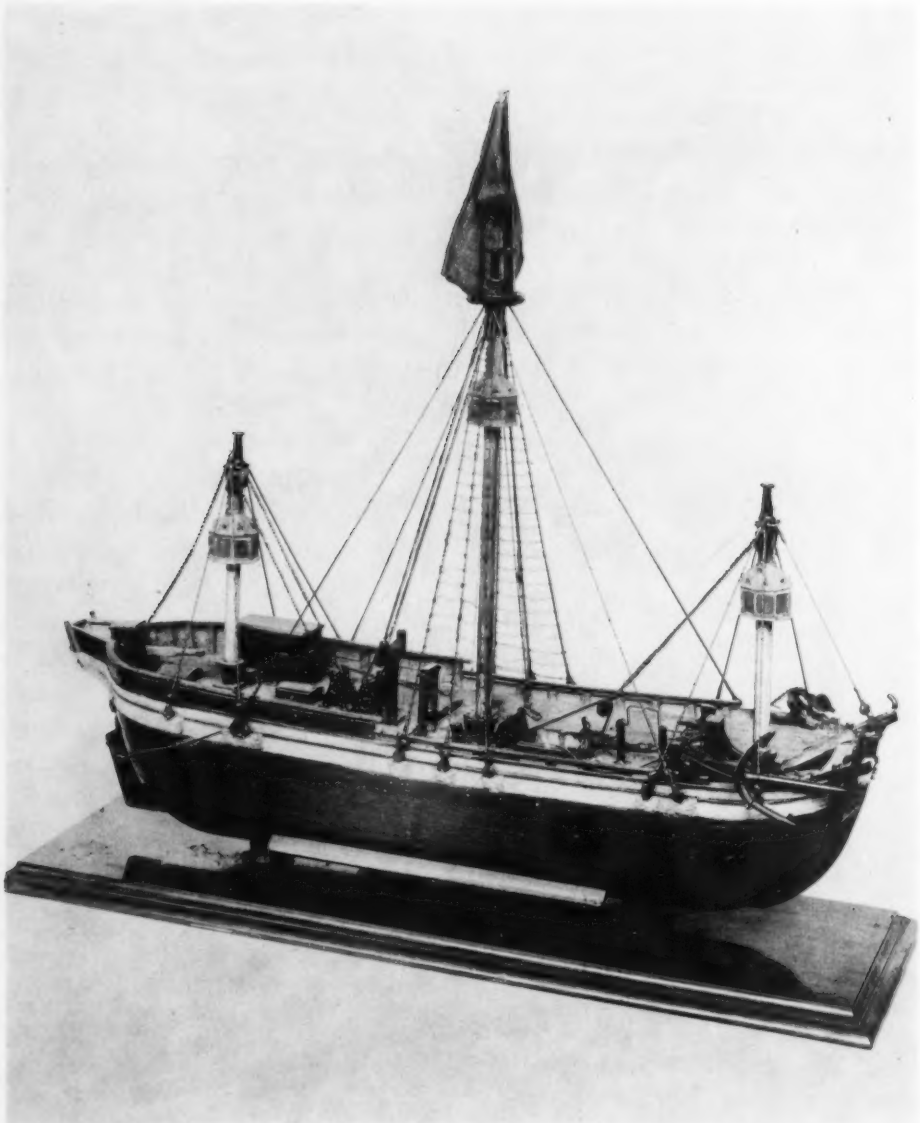


Goodwin light vessel

Model owned by the Trinity House, Tower Hill, London, until its destruction in the German air raid of 30-31 December 1940

Reproduced by permission of the Science Museum, South Kensington, London

By 1825 the vessel on station was worn out and a new one was built, the first to be designed and constructed for this purpose. In the new one a single light was introduced in a lantern built round the mast and so fitted that it could travel up and down the mast and be housed on deck when not in use. It was also provided with a revolving light, the first light-vessel to have a character light. Both the travelling lantern and the mechanism for revolving the light, continued in use with only minor improvements for nearly a hundred years. About 1822 chain cables were first introduced into the light-vessels, but it is a curious fact that at first they were only provided for the standby cable, and only gradually superseded the hempen ones; several years elapsed before the latter were finally abolished.

Plate 46 represents an eighteenth-century light-vessel, either the *Dudgeon* of 1736 or the *Gwers* of 1788. Details of the former are entirely lacking, but the crude structure on the fore-deck of the vessel carrying a single lantern corresponds with the somewhat meagre description of the original *Gwers* vessel. Endless difficulties were experienced with the lantern of the latter in providing sufficient ventilation for the candles and at the same time excluding water from entering the lantern in rough weather, and when sperm oil replaced the candles the problem became the smoke, which quickly blackened the glass unless adequate means for its escape were provided, without at the same time allowing heavy spray to extinguish the light.

Plate 47 is of the first *Goodwin* light-vessel of 1796, and is an entirely different type of vessel. From her design it is not improbable that she was a Dutch-built ship, however, it cannot be known to what extent she was altered in order to adapt her to this purpose. Plate 48 is also of a *Goodwin* light-vessel of the period, but whether a newer vessel or the same one after a general overhaul and some improvements made is not certain. From the similarity in the design and type of the vessel itself the latter seems more probable.

As already noted, these vessels were dependent upon hempen cables for their ground tackle, although a length of chain was used by the *Goodwin* when first placed on station; however, this was only for the part of the cable lying on the sea bed. To the chain was clinched the twelve-inch hempen cable by which the ship rode. At all times a continuous watch had to be kept on the cables, and they were always veered to a fresh nip every day. Where it passed through the hawse-pipe the cable was rounded with a three-inch rope over which canvas parcelling was laid, and over this a green hide to take the chafe. In bad weather the work was very heavy; the old journal conveyed some idea of the anxiety of the men over their cables

during the night watches, and the labour entailed in dealing with the continual chafe on the gear caused by the heavy surging of the vessel. The cables then had to be veered away every watch, and sometimes oftener; as soon as it was done it was necessary to prepare the cable abaft the hawse-pipe for the next nip. Day and night, in blinding rain, sleet, or snow, this work had to be carried out in readiness or risk the cables being cut through.

After a gale it sometimes took two or three days to shorten in the cables and strip them of the worn-out services, and then heave in to the clench to see whether it had suffered from wear on the sea bed. Each light-vessel had its own tender, a small sailing cutter stationed at the nearest port, at Ramsgate for the *Goodwin*, and at Littlehampton for the *Gwers*. The tenders kept as constant a watch on the light-vessel as was possible, and as soon as a gale moderated they put to sea at once with provisions for the men and a supply of chafing gear, including green hides, for the cables. They always carried a new cable with them in case it was needed. After a heavy gale the light-vessel had usually dragged out of position, and the tender had to assist her back to her station. In order to do this they had to cruise about and wait for favourable wind and tide, and when doing so it was necessary to keep a watchful eye on every doubtful craft in sight; although the privateers did not molest the light-vessels, this immunity was not extended to their tenders, who were often chased, and sometimes had to abandon their work and run for harbour in order to escape capture.

The conclusion of peace after the Battle of Waterloo ended the hazards to the tenders. The introduction and eventual improvement in chain cables lessened those of the light-vessels, and the building of larger and more suitable vessels improved the conditions of life for their crews. The steady improvement in lighting apparatus, and more particularly the introduction of powerful lenses and electricity, has made the light-vessel a most important aid to navigation, but some account of their crude and humble origin is worthy of being placed on record.

Notes on Chesapeake Bay Skipjacks

BY HOWARD I. CHAPELLE

THE lack of satisfactory written records that would permit tracing the history or the development of an American type of small commercial sailing craft is illustrated in the case of the Chesapeake Bay Skipjack. The published information is both scanty and inaccurate; and there seems to have been very little mention of the type in magazine or newspaper articles prior to 1910. Most of the descriptive and historical material has appeared in the last twenty years. In order to fill some of the serious gaps in published information on this curious type of work boat these notes were prepared.

The sources are, of necessity, the memory of living men, usually of little education. The danger of accepting statements made from memory is obvious; therefore every possible effort was made to check one statement against another and to compare recollections of the more intelligent individuals. The writer, in operating a small shipyard at Cambridge, Maryland, had an excellent opportunity to measure the hulls while they were on the marine railway and to talk to owners and masters. It was found that when a number of owners, masters, and carpenters were gathered in the yard at noontime, or after quitting time in the evening, the conversation could be steered toward recollections of old boats, builders and the sailing experiences of the men present. Often arguments started, in which a number of things would be discussed which would rarely have been discovered by direct questioning. This method of checking statements overcame many of the difficulties of deciding on the accuracy of such information as could be gathered. In general, the owners and masters of the boats were intelligent, and this was markedly true of the older boat carpenters, even though these men lacked formal education.

Perhaps the first point discovered was that in the vicinity of Cambridge (in the area extending from Oxford to Deal's Island at least) the word 'skipjack' is not used as a name for the type, but rather for the rig having a

jib and a leg-of-mutton mainsail. The type name for all dead rise (or V-bottom) hulls, above the size of a skiff, is 'bateau'; whether the hull is power- or sail-propelled. The 'skipjack rig' was often mentioned when speaking of old round-bottom sloops that had been given leg-of-mutton mainsails. Bateaux were also referred to as 'two-sail' or 'three-sail.' The former were jib- and mainsail-rigged, while the latter were bugeye-rigged, as to sail plan. Skiffs, having a mainsail only, were sometimes described as 'one-sail bateaux', if over twenty feet in length. Only in one case did an old waterman speak of a hull model as a 'skipjack'; this was in referring to an old bateau that was fore-and-aft planked on the bottom. No one knew where the terms 'skipjack' and 'bateau' originated. The only pertinent observation, in regard to 'bateau,' is that there were many French on the Bay, even in colonial times. For example, there was a Hugenot colony on Ross Neck, on the Little Choptank about ten miles from Cambridge, prior to the Revolution and there are many French names still found in Dorchester County.

It was generally agreed that the V-bottom hull developed from flat-bottom skiffs and boats, and that numerous intermediate models were in use in various localities before 1890. However, some of the oldest men were certain that there were few over twenty-four feet in length prior to 1886. This date should not be taken as accurate, since it probably would apply only to one or two parts of the Eastern Shore at best. Some of the flat-bottom hulls were in use as late as 1915 in isolated waters; but such hulls were old by that date, apparently. The last of the intermediate type, known now as the 'Hampton Flatte,' seem to have been built at or near Bishop's Head, at the mouths of the Nanticoke River and Fishing Bay. These were usually large skiffs, though some had 'long heads.' Between Bishop's Head and the Bay is the lagoon known as the Honga River, and the three low islands known as Hoopers Island. Extending southward of Bishop's Head and also low islands, such as Bloodsworth, Holland, South Marsh and the group known as Smith Island. Still further to the south is the well-known Tangier Island. Tangier Sound separates these islands from the mainland to the eastward, with the mouth of Pocomoke Sound entering Tangier Sound a little to the southeast of Tangier Island. These waters are shoal; the islands and mainland shore are low and marshy. Even now, the small villages in this area are very isolated. Only a few can be reached by road from the main highways of the Eastern Shore. When one has visited this area, the existence of obsolete types can be readily understood.

This area, particularly in the neighborhood of Hoopers Island and Bishop's Head, seems to have been the home of the three-sail bateaux.

These hulls, as will be seen, were very similar to the common two-sail bateaux except in being a little narrower in proportion to length. The reason for the existence of the bugeye-rigged bateaux in this area is difficult to understand. Both two-sail and three-sail boats were built in this section, during the same period of time. The only reasonable explanation seems to be that crews were not easily obtained in such a sparsely settled area and therefore it is possible the rig depended on the number of men the owner thought he could depend upon for a crew, or upon the number of male relatives the owner had. There was much in favor of the bugeye-rigged bateau; she could be sailed with a smaller crew than a two-sail bateau of the same length, and was handier in heavy weather. The most serious objection to the three-sail bateau was her lack of power in very light weather. Then a very large sail area was needed to drag the oyster dredge over the bottom and in this respect the two-sail boat was better. The general reputation of the three-sail bateaux is that they were the best sailers in heavy going but not as fast as two-sail boats in light weather. It is reasonable to suppose that the almost complete disappearance of the three-sail type may be traced to the superiority of the two-sail rig in oyster dredging. Like the early two-sail bateaux, the three-sail hull seems to have passed through stages of development ranging from flat-bottom to dead rise in a relatively short period of time.

Each portion of the Eastern Shore of both Maryland and Virginia developed characteristic models or finish in bateaux. An experienced observer can soon distinguish where a boat was built by merely looking at her. In general, the home of the bateau extended from Tilghman Island, Talbot County, Maryland, to Pungoteague Creek, on the Eastern Shore of Virginia. Few bateaux were built outside this area on the Eastern Shore and very few appear to have been built on the Western Shore of Virginia. The Virginia bateaux appear to be less well finished and modeled, generally speaking, than the Maryland bateaux. The center of the bateaux-building area seems to have been around Deal Island, at the south side of the mouth of the Nanticoke River, and almost within sight of the south tip of Bishop's Head.

It is not possible for the casual observer to judge the older bateaux's appearance, as originally built, by their appearance today. Since most of the bateaux in use in 1941 were built over twenty-five years earlier, there have usually been changes in deck arrangement to meet requirements developed in their work since the time they were launched.

A great many of the older bateaux were not flush-decked when first built. Before the coming of the gasoline engine and the 'push-boat' now

used, it was necessary to propell the bateau with sweeps in a calm. Also, hand winches, or 'winders,' were used, instead of the gasoline-powered winder now used. Only large bateaux, say over thirty-six feet in length, were usually flush-decked. Most of the three-sail bateaux were first built with a standing-room or cockpit (called a 'sunk-platform'), as were the smaller two-sail bateaux. The change from sunk-platform to flush-deck took place between 1903 and 1910, apparently. The bateau built with the sunk-platform deck arrangement had her cabin trunk forward, and none aft. Abaft this trunk was usually a hatch, unless the boat was small enough to have a long cockpit. In three-sail bateaux the hatch was between the trunk and the mainmast. (Bugeye masts are named schooner-fashion, fore- and mainmast, rather than ketch fashion, main and mizzen.) Abaft the hatch, in a two-sail bateau, or abaft the mainmast in a three-sail bateau, there was a sunken deck or cockpit, with its level about 8 inches below the sheer line. Lead pipe scuppers about 1 inch in diameter led through the side of the hull at each corner of the fore end of the cockpit. The decks, or 'half decks,' at each side of the cockpit were about 18 inches wide. At the stern, there was a sternsheet, or deck, 2 or 3 feet in length; this was a part of the main deck of course. Around the cockpit was a coaming about 4 inches high above deck level. In the cockpit were placed the 'winders,' usually two in number, close to the fore end of the space. Where the dredge-lines passed over the coaming there was a oak cap on the coaming, or on the rail. Most of the boats then had merely a log rail; only the larger had the open rail now seen. The idea of the cockpit was to permit the 'winder' man to stand at his work and not be hit by the boom in tacking or jibing. Occasionally the 'winders' were placed on the main deck, instead of in the cockpit, to lessen the stooping required of the 'winder' operator.

Sweeping was done in the 'sunk-platform' bateaux by means of long sweeps and oarlocks placed either on the deck outboard abreast the middle-length of the cockpit, or in the log rail. The large flush-decked bateaux and some small bateaux had sweep-locks in the top of the upright after roller chocks (or dredge-line 'stop-chock' used before rollers became popular) required for the dredge-lines. The sweep-locks were unshipped when not in use. Bugeyes were swept along with similar gear, before motors were introduced, by the way.

The construction of the hull seems to have varied but little since the earliest bateaux were built. All were built of virgin growth of loblolly pine, and heavily constructed. The heart of the tree was used, and great care was usually employed in the selection of timber. The keel structure consisted of a tree hewn to shape. A curved tree was required and the

timber ran the full length of the boat, from heel of stem to bottom of transom, in one length. The keel was all inside the rabbet and was really a keelson. In the better boats it was rabbeted for the bottom plank. It had the center-board slot cut into it by means of auger and whipsaw. Great care was taken to hew this timber to the proper profile curve and to the required size. The plans indicate the size of the keelson in some cases, it will be seen.

The bow construction varied; three methods are commonly seen. The oldest method was to use three to ten logs, or 'chunks,' placed athwartship at the bow, edge-fastened fore-and-aft, and then hewn to shape. The keelson was usually made deep enough at its fore-end to pass over the top of these chunks, after notching the keelson the depth of the chunks, so that the keelson reached the stem-post. Another variation was to notch the keelson into the aftermost chunk only. This construction necessitated the hull being built upside down, a practice common on the Bay in all V-bottom construction up to fifty-five feet hull length. It will be seen that the amount of dead rise possible, using chunks placed athwartships, was limited by the depth of the chunks available for the purpose. This worked well in bateaux having almost flat bottoms, but it was found that increased dead rise had certain advantages so a different fore-foot construction was developed.

The next step was to carry the keelson to the stem and place chunks fore-and-aft on each side, running 3 or 4 feet aft from the stem. These chunks were fastened athwartships. Usually treenails were employed to hold the chunks in place until hewn to shape, then iron drift-bolts were driven after the work was completed. By having the keelson hewn so that its top rose suddenly at the chunks, it was possible to have the chunks high enough above the bottom of the keelson, or rabbet, to permit a good deal of dead rise to be used at the bow without requiring timber of tremendous size.

In the two types of 'chunk' fore-foot construction, the inner stem-piece, or apron, was stepped on top of the fore end of the keelson and secured by a heavy knee well drifted. The apron was V-shaped in section and after the sides were in place an outside stem was put on, thus no rabbet was required to be cut in the stem. In some cases the number of chunks used, when placed fore-and-aft, were four but two (one on a side) is by far the most common. The drawback of the chunk method of making the fore-foot, aside from the labor of hewing, was that the exposed end grain often led to rot or damage. As a result of this, and steadily increasing dead rise used in new designs, 'staving' became widely used. In this method the keelson is

carried through to the stem and the space between the rabbet and the chine is vertically planked with tapered staving. This planking must be thicker than the rest of the bottom plank, as the twist required to plank from straight rabbet to curved chine requires that each staving piece be dressed off on the inside. When the staving is in place the outside is then dubbed off smooth to fair in with the bottom plant. This method of construction is used in the modern V-bottom Bay power boats and in many Virginia-built bateaux. The most common method of staving is to permit the end of the keelson to run through the staving and to dub off its end to a stubby V outside the staving. By this means a rabbet can be cut that is well inboard of the true rabbet produced by the addition of gripe piece and outside stem-piece to the fore end of the keelson. The advantage of this is that less twist in the staving will be required. Only in very rare cases is the fore-foot made by using staving laid on fore-and-aft, then dubbed off. Perhaps this is a relatively recent idea, but it is not seen in sailing bateaux as far as I know. I have only seen this construction used in a few 'push-boats' built by a single builder.

The bottom planking is laid on athwartships. The run of the bottom planking is not at right angles to the center-line however, but at an angle, so that the outboard or chine end of each piece is well abaft the inboard or rabbet end. This is done to avoid having to twist the plank a good deal. In a few craft, usually Virginia-built, fore-and-aft planking is used at the extreme stern, permitting a hollow V to be worked into the after sections and transom. Only a few builders ever employed this, however. The bottom, in this case, required a heavy frame where the run of the planking changed.

The side planking was not spiled on, as a rule. Usually it was lined off sharpie fashion, using very wide strakes. The sides were started by first placing the wale, or 'bends' on the moulds. The hull was set up in the usual upside-down position, with keelson, apron, transom and moulds in place. The number of moulds varied with builders, many used only a 'midship mould but three were used by most of the better builders. The chine logs were first put in place before the 'bends' were fitted. The 'bends' being completed, the sides were completed strake by strake. As each strake was fitted it was edge-fastened in place. The drift-bolts were spaced so as to come between the frames when the latter were fitted. The number of strakes used were usually few, and so each strake usually had an edge-fastening in every other frame space. When the strake ran out on the chine, aft, it was common to form a hook in the strake above, to avoid feather ends in the chine-strakes; though many builders did not bother

with this refinement. When the sides were completed, the bottom was planked and the hull turned over.

The frames were merely stanchions running from chine log to deck. These rarely were notched over the chine logs and were commonly the same moulding as the chine was sided. The sheer clamp was then put in and was usually deep enough to reach to the underside of the deck; the deck beams were therefore let into the clamp their full depth or moulding.

The deck beams were made with a great deal of crown as this was considered necessary to seaworthiness. Probably this cleared the deck of water, in rough weather, fast enough to prevent the load of it from affecting the stability of the shoal hull. The deck was laid of narrow plank, fore-and-aft, or with the run of the waterway, as the builder preferred. Cedar, or juniper, decks were considered the best, but loblolly pine was generally used. The method of constructing the waterway varied among the builders. Some of the old and better builders moulded it out of thick stuff, of oak or pine, shaped so as to form part of the log rail and having scupper holes bored through it where the outboard side rose above the deck thickness. Usually, however, the waterway was the same thickness as the deck, with the log rail fitted on top of it. The log rail was usually of oak, and had scuppers cut in its lower edge.

The center-board case was constructed in the orthodox manner. It was low forward, in the cabin trunk, for convenience, but came to the deck abaft the trunk. In the main hatch it was capped. The cases were always heavily built and thoroughly edge-bolted, with heavy sills. The center-board pivot was high in the case forward, at water-line height or slightly below it. The pin was usually of wrought iron, but locust or oak pins were by no means rare.

The center-board was always of oak, heavily edge-fastened. The board was roughly of rectangular shape, with the top shaped to fit the case profile. The lanyard was secured to the board by an iron strap let into the sides of the board. The pivot hole commonly was a slot, about 6 or 8 inches long, cut more or less diagonally to the bottom edge of the board. The fore end of the slot was the iowest. The lower fore corner of the board was well rounded. When the board was in place, and hauled up, it will be seen that the slot allowed the forward portion of the lower edge to extend below the bottom some 5 to 8 inches. The board, then, could be lowered a little so that its lower edge was projecting out of the slot for the full length of the center-board. This permitted sailing in very shoal water. If the board hit the bottom, the rounded fore end and the slotted pivot allowed it to rise over an obstruction and move aft a little in its case, and thus avoid dam-

age. When the boat went on the marine railway the board was always dropped out of its case prior to hauling, and was replaced afloat when the boat was launched. This was done so the case could be examined and painted. The center-board should be made of green oak and kept in the water except when being painted. A new board for a 45–50-inch bateau cost about $65 in 1943.

The stiffening of a bateau is very important. In order to add to the strength of the hull, so that the strains of loading, sailing and going aground could be withstood, two or three strong-backs were required. These were heavy timbers, running athwartships over the keelson, from chine to chine. Knees are placed at each end, against the sides, and well fastened. This timber helps retain the dead rise and ties the bottom together. One strong-back is required near, or at the heel of each mast. In a two-sail bateau there is also at least one strong-back well aft, just abaft the center-board case in most boats. In small boats the after strong-back is sometimes further aft. The strong-back at the heel of the mast in a two-sail bateau, or at the heel of the foremast in a three-sail bateau, is further strengthened by a tie-rod run athwartship just below the bends. This is fore-locked at each end outside the planking, and so passes through planking, frames and strong-back knees. It can be taken up inside by a turnbuckle link. In some of the older boats, a heavy double-diagonal bulkhead 3 inches to 6 inches thick took the place of the tie-rod in adding strength to the mast partners' strong-back. This bulkhead had an oval opening permitting access to the forepeak.

All bateaux have longitudinal battens on each side of the keelson, roughly half way out to the chine log. Sometimes these battens are parallel to the keelson, sometimes they are sprung somewhat so that they run from transom to the chine well forward, just abaft the mast parteners. These battens are usually of oak and are fastened to the individual bottom planks. and so keep the bottom smooth.

The skeg, or outside keel, is made in two pieces and is sided to agree with the width of the center-board slot. The piece running from the center-board slot to the stem form a fore gripe and is sometimes deeper than the after skeg. The after skeg is made up of a number of pieces edge-bolted with a stern-post worked into the after end to protect the end grain. Both skeg and gripe are well bolted to the keelson. If the latter is not rabbeted the skeg and gripe piece help form the rabbet. This last is not favored as it is considered weak. If the bateau grounds heavily enough to twist the skeg or gripe then it will probably move and loosen the bottom planking. Hence, the rabbeted keelson is the better construction. Some bateaux

have keel-battens on each side of the center-board slot, to carry the line of the shoe from bow to stern.

The specifications for construction of a first class bateau would call for galvanized iron fastenings and hardware throughout. Spikes and boat nails are used for plank fastenings. Loblolly pine would be used throughout, except for the following members: center-board, bends, plank-sheer, log rails, rail cap, deck beams, clamps, chine logs. Side frames and shoe on skeg and gripe. These would be of white oak. Post oak is considered the best oak available. Many builders make apron, stem and cutwater of oak, stern-post and rudder-post, or stock, are always of oak. Mast and spars of loblolly pine—'Rosemary' pine obtained from Virginia is preferred.

Deck structures are of loblolly pine and cedar, or juniper. All knees are of loblolly pine. Hackmatack is rarely found as it must be imported and is therefore expensive compared to pine knees. The open rail is made by the use of rod and pipe—the rod extents from the rail cap through the log rail into the waterway, fore-locked flush to top of the rail cap. The pipe is cut to proper lengths and used as spacers between rail cap and log rail. Great care is required to space these properly and to set them at the right rake.

Knight-heads are a characteristic of all the bateaux above twenty-four feet in length. These are of oak or pine and are 2 to 3 inches thick. They extend from the top of the chine log through the plank-sheer to approximately the height of the rail cap. They are edge-fastened to the apron and, if made up of more than one piece are also edge-fastened together with drift-bolts. A breasthook of blocking is fitted at the underside of the deck, between the knight-heads; sometimes there is another breasthook on top of the bowsprit as a finish piece.

The cutwater shape varies among the builders. The old Maryland boats had long, deep heads, with the bowsprit set almost parallel with the load water-line. The decoration of the 'long head' was fairly ornate and followed bugeye practice. Figure-head, trail boards and knees and head rails with one or two rail knees was the common practice. The Virginia-built bateaux usually had rather ugly heads. Often the stem was very wide at the rabbet and was thinned down at its fore edge. This made the long head difficult to fit properly. The drawings show better than a description the appearance of the long heads built in Virginia and Maryland. The bowsprits usually are hogged down at the outboard end to a marked degree; some of the hog is hewn into the stick.

The shape and construction of the stern is a matter of taste with the individual builders. The most common stern is the transom with the stern-

post outside, with an outboard rudder. The next most popular is the overhang stern with rudder inboard. Usually, in the overhang stern the transom is more or less heart-shaped in appearance. This illusion is accomplished by use of mouldings, in most cases. However, a few bateaux have log quarters worked in so the outboard edges of the transom can be rounded. By planking the bottom of the overhang stern fore-and-aft, a slight hollow is sometimes worked into the bottom of the transom. Usually, in bateaux, the bottom is permitted to project a little beyond the transom face; this edge is rounded so that it looks like a moulding. The addition of moulding in the topside of the transom completes the decorative features of this stern. The framing of these sterns are in the orthodox manner and so require no description. The planking of the transom is edge-fastened however. At various times a number of round-stern bateaux have been built. Some have the stern staved vertically in about the same manner as that used in the New Haven sharpies. The majority, however, had the sterns built up bread-and-butter fashion. These sterns were hewn smooth inside as well as out and care was taken to keep the weight as low as possible. The bread-and-butter construction was prone to rot and staving undoubtedly was superior.

The interior of the cabin requires few remarks. When only the fore trunk was in use, there were only two or four berths and a stove. The stove was usually a small cast-iron 'pot-belly,' on which cooking could be done, but sheet metal 'air-tight' stoves are now often used. Wood-burning stoves are required of course. When the deck plan changed, with the coming of the gasoline engine 'winder,' many boats had an after trunk added, or as in some cases the fore trunk was removed and a large after trunk was built. These, in the large bateaux, have almost a standard cabin arrangement. There are usually four berths, if the bateau is large enough, two in each wing under the side decks abreast the trunk. The forward pair of bunks extend forward of the fore bulkhead, into the hold; but are partitioned off from the hold of course. The aftermost bunks extend abaft the trunk into the lazerette, but are not usually partitioned off in the smaller boats. In most cases the berths are entirely under the side decks and do not project into the trunk cabin. The berths, therefore, can be separated from the cabin by a partition, in which is cut a large square opening for entering each berth. Curtains are often placed over these openings. A seat or transom runs in front of the berths and across the after end of the trunk. The fore bulkhead of the trunk cabin is bare and a heating or cook-stove is usually placed close to it on the center-line of the boat. A few of the larger and better built bateaux have panelled cabins. These have the tran-

som seat horse-shoe-shaped, and the whole after end of the cabin trunk is panelled with curved panels at each after corner of the trunk, following the curve of the transom seat. The ladder from the companionway lands on the transom seat; in a small boat the transom seat, at the after end of the trunk, is used as a step for the companionway. Small cook stoves of the 'Atlantic' type are often seen in the after cabin.

Most of the bateaux have the cargo hold ceiled. This is done by laying 'sleepers,' or false frames, over the bottom athwartships, from keelson to chine, and then ceiling in with pine plank. The sides are often ceiled also, with the ceiling secured to the side frames. The ceiling is required when cargo is carried. In the spring of the year the larger bateaux carry oyster shells from the oyster houses to the beds, for seed purposes, and so ceiling is required in these boats particularly. In smaller boats, dredges and other working gear are carried in the hold and hence ceiling is common even in bateaux not used for cargoes.

Ice sheathing is required on bateaux by most owners. This is usually 22- or 26-gauge galvanized sheet iron cut into plates about 18–24 inches and 14–16 inches wide. Before being placed on the hull, the workman takes a straight edge and strikes a line from corner to corner, each way so that a cross is formed on the face of each plate. Then he draws parallel lines, 3 inches apart, on either side of these two diagonal lines so that the whole surface is laid off in squares or diamonds. Where all lines intersect he punches a small hole for nailing. Galvanized roofing nails are used to secure the plating to the hull. The plating laid up vertically, covers the hull from the bow to abaft amidships, to at least the after ends of the rollers on the rails. Plating extends from 18 inches to 24 inches below the water-line to 10 inches or 12 inches above. The top of the belt is parallel to the load water-line. In way of the dredge rollers the plating is always brought up to the underside of the guard at the lower edge of the bends, for the full length of the rail roller. All plating overlaps toward the stern. There are usually two belts; the upper belt overlaps the lower. Overlap is enough to permit one row of nails through both plates. First the hull, in way of the sheathing is tarred, then tarred felt is put on. Then another coat of tar is put on and finally the hull is metaled. The whole surface is nailed, it will be seen, and not just the edges and corners. At the cutwater the plating is often doubled. Most owners take off the sheathing each spring and replace it each fall.

The hulls are painted white, topsides, deck and deck structures. In a few cases the deck is buff, however. Bottom is red or brown copper. Head rails, trail knees and often the moulded, or 'cove,' line at the bottom of the

'bends' are striped with color—red, black, orange, green or yellow. The trail boards are black, green, or blue-black with carving painted in colors or gilded. Bowsprit is painted white its full length. Mast is painted white to boom. Boom is sometimes painted, sometimes varnished. Masthead is often white, if not painted it is varnished. Blue is not used on oyster bateaux; baymen consider it 'unlucky.' Some of the old bateaux had a multicolored stripe along the lower edge of the bends; red, orange, black were used here.

Ballast is required in most bateaux. It usually consists of a few stones or a little scrap iron stowed aft to trim the hull. Some bateaux require ballast abaft the center-board case to give increased stability with the heavy deck load made up of 'winder' and dredging gear. Ballasting of this type is required only in hulls having much dead rise as a rule. 'Brick' ballast is not used; like blue paint it is 'unlucky.'

The location of the 'winder' varies with the individual boat, to some extent. Some boats have the 'winder' on the after cover of the main hatch; others have it on the deck just abaft the main hatch. The latter position is by far the most common and is universal on the boats over forty-five feet over-all length. The decks of bateaux are sheathed in 3/4-inch or 7/8-inch pine, under and around the 'winder.' The deck sheathing extends from the fore end of the main hatch or the fore companion, to the fore end of the after cabin trunk, it extends from rail to rail athwartships. This sheathing, and the dredging gear, and 'winder,' are removed in the spring and not replaced until fall. If the sheathing is left on deck the latter will rot very rapidly.

Little need be said about the sail plan and rigging. Grimwood has given very complete drawings of a two-sail bateau rig in his model-building book[1] and Brewington has described the bugeye-rig in his book[2] on that type. The old bateaux, both- and three-rail rig, had no shrouds when originally built. Shrouds were added when the power 'winder' came into use as the heavy deck load often put a heavy strain on the rig. The heavy deck load brought about by the power 'winder' also resulted in many bateaux having their decks taken off, and being raised up from 6 inches to 12 inches, to permit increased displacement without undue loss in freeboard. Practically all bateaux now have wire standing rigging; the *Gertrude Wands* shown in one of the plans, and now a yacht, is the only one I know of that retains hemp standing rigging. Lanyards and deadeyes are used on the shrouds.

[1] V. R. Grimwood, *American Ship Models and How to Build Them* (New York: W. W. Norton and Co., 1942).

[2] M. V. Brewington, *Chesapeake Bay Bugeyes* (Newport News: The Mariners' Museum, 1941).

Rigging on 41'-6" Bateau

Bobstays and other headrigging

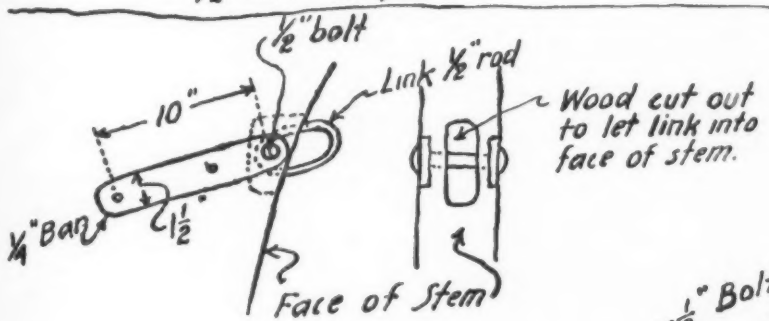
Fore stay- $\frac{1}{2}$"dia wire set up on self below bowsprit on short chain pennant on bobstay plates.

Bobstay- $\frac{5}{8}$" chain used, $\frac{3}{4}$" turnbuckle, for lower bobstay turnbuckle at bowsprit.

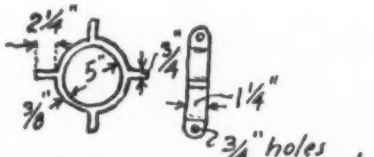
Bowsprit Shrouds – $\frac{3}{8}$" chain, $\frac{1}{2}$" turnbuckles, latter at bowsprit

Mast head stay - $\frac{5}{16}$" wire, shackle and thimble at bow-sprit band, same at masthead band.

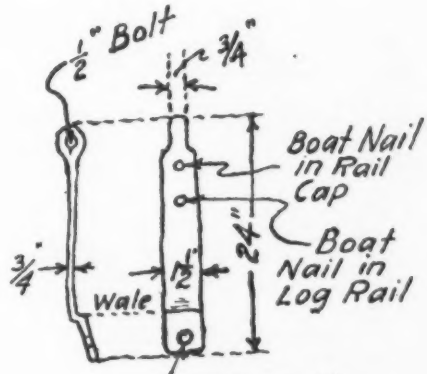
Shrouds - $\frac{5}{16}$" dia wire, or $\frac{7}{8}$" dia. hemp. 4" dia deadeyes, $\frac{1}{2}$" dia lanyards.



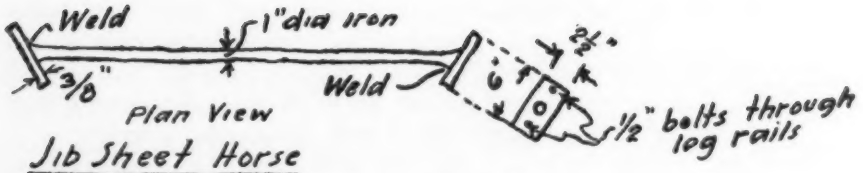
Bobstay Plates
41'-6" Bateau



5" Bowsprit Band
41'-6" Bateau
At outer end of bowsprit

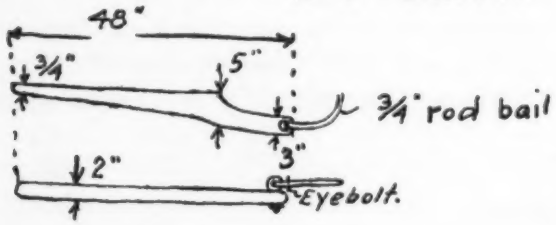


Chain Plates
41'-6" Bateau

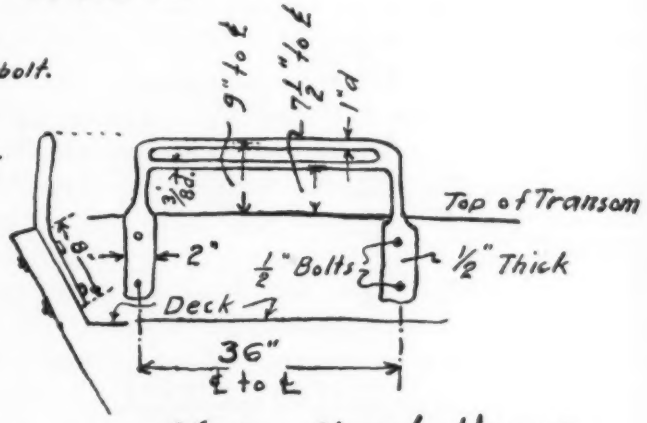


Jib Sheet Horse

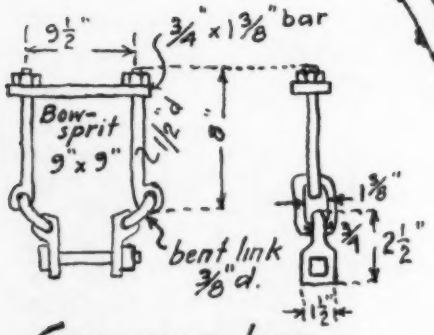
Reaches from rail to rail 2½" deck to ℄ at waterways
41'-6" Bateau



Main Boom Jaws
41'-6" Bateau



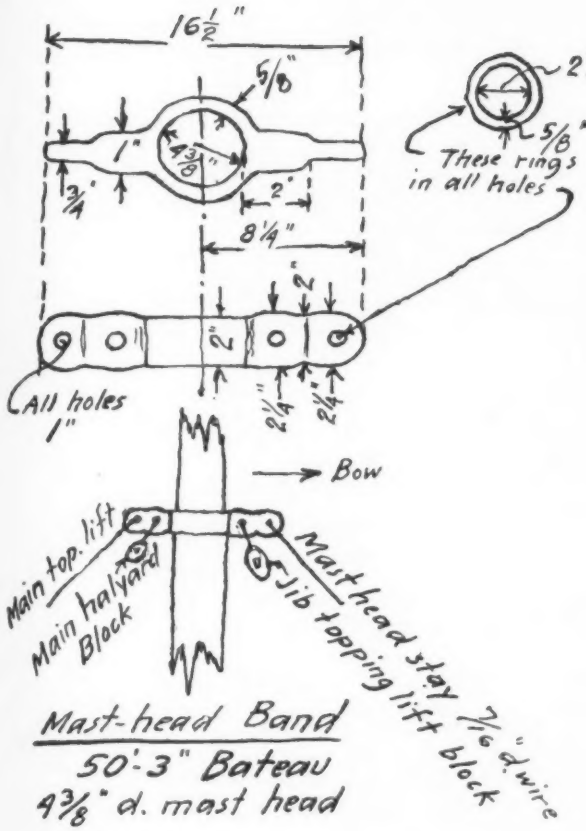
Main Sheet Horse
41'-6" Bateau.



Gammon Iron
41'-6" Bateau

Usually all nut and bolt-heads are square.

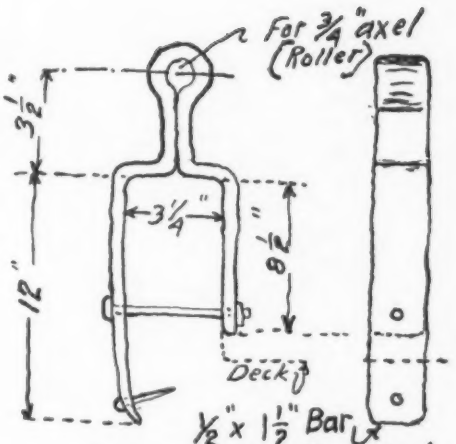
Pipe in rails 1" o.d.
on 42'-6" Bateau



Mast-head Band

50'-3" Bateau

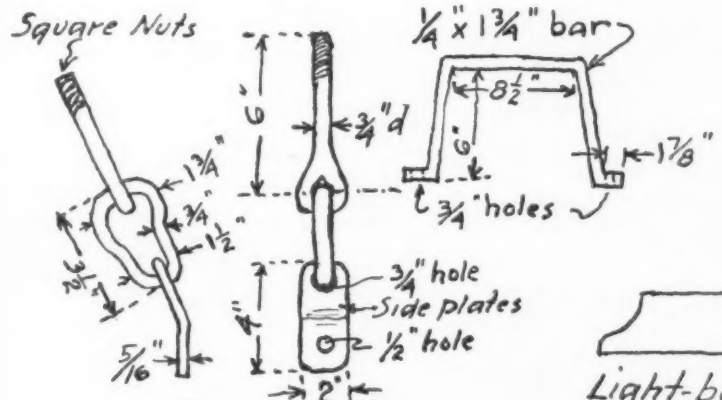
4⅜" d. mast head



Fore Roller-Bracket

41'-6" Bateau

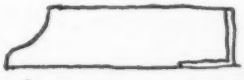
After one similar but straps same length as short one here.



Two required.

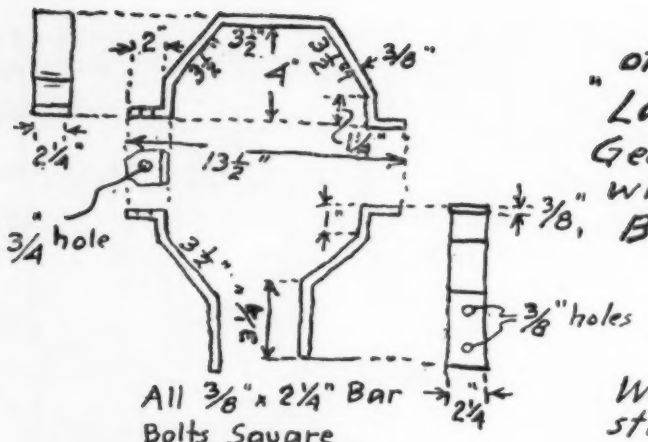
Inner Gammoning

50'-3 Bateau



Light-box shape

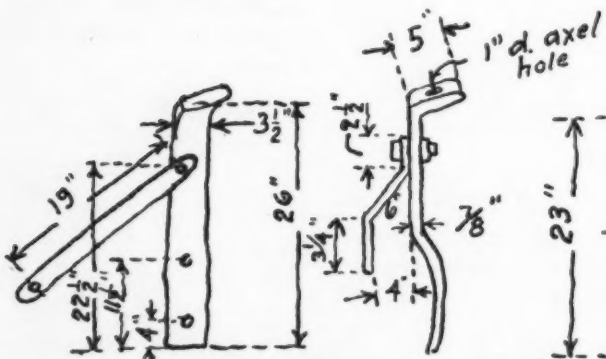
41'-6" Bateau



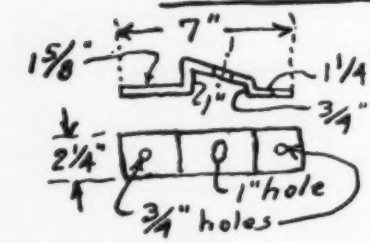
Outer Gammoning
50'-3" Bateau

Note: Majority of Bateaux use "Lake" Steering Gear; Iron steering wheels, as in Bugeyes.

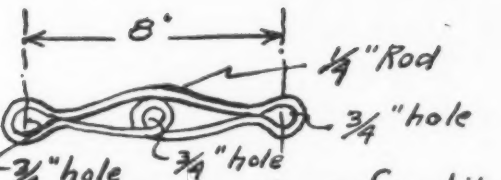
Wood Blocks, iron stropped, are used in rigging, except in Lazy Jacks.



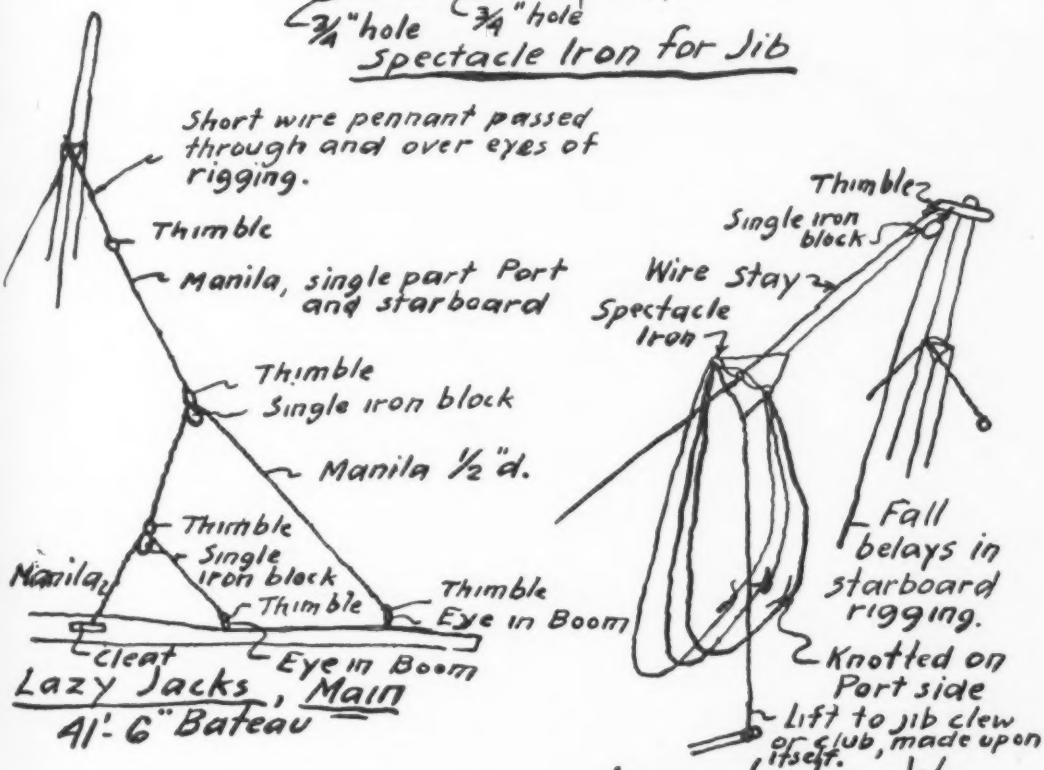
After Roller-Bracket, Roller, Both Horizontal and Upright are of same construction.
50'-3 Bateau



Roller Heel-iron

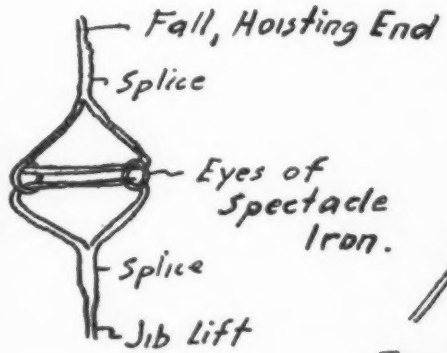


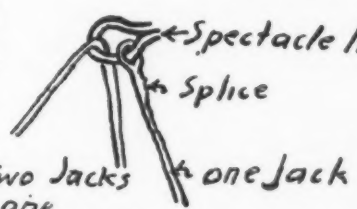
Spectacle Iron for Jib



Lazy Jacks, Main
41'-6" Bateau

Lazy Jacks Jib
41'-6" Bateau
Three Lazy Jacks on each side of Jib
3/8" d. Manila





Rigging in Spectacle Iron

The ironwork on bateaux is very light compared to New England-built craft. The sketches that are reproduced on pages 281, 282, 283, 284 and 285 show characteristics of much of the ironwork found in this type of hull. Most Maryland-built bateaux, particularly those built in Dorchester County, have the bobstay plates set well abaft the fore-edge of the cutwater and the link of the bobstay is let into the face of the cutwater.

A few remarks on bateaux design, and proportions, will serve as a preface to the description of a few individual boats. The beam to length proportion of three-sail bateaux was from 3.4 to 3.0; 3.2 being about average. For two-sail bateaux, the beam was greater—the proportion ranging from 2.8 to 3.1; the average is about 2.9. The spar lengths of two-sail bateau seem to have averaged 4 x beam at load water-line; length of bowsprit=beam at load water-line; length of boom=length over-all (rabbet to taffrail) plus 2 feet. Three-sail bateaux spars were about of the following proportions: foremast=beam at load water-line x 3.75; mainmast=beam at load water-line x 3.45; bowsprit outboard=beam at load water-line; fore-boom length varies from .543 to .550 x length of hull on deck; main boom is usually about .89 to .893 x length of fore boom. Jib clubs on both rigs, are usually about one foot less than one-half the length of the foot of the jib. Many bateaux use a club at the head of the mainsail in a two-sail bateau, or at the head of the fore-sail in a three-sail bateau, to make the head of the sail stand better, or to raise the head of the sail above the halyard block. In this case, the length of this club is about one-third longer than the distance from the upper mast hoop; which is below the main rigging; to the top of the mast head. The halyard is secured to the club about two-thirds of its length from the lower end. Often this club, which stands like a gunter-pole, is added when the mainsail or fore-sail has stretched too much to allow the halyard to be secured to the head of the sail. The design of the hull has been affected by opinions of owners and masters, as is natural. Perhaps the most marked departure, in design of the bateau, from yacht practice is in the chine profile. Where the chine of the yacht raises well above the water-line at the bow, very few bateaux are so built. It has been found that the chine should be low forward, the bateaux builders claim, if speed is desired. Tank tests, in recent years, have borne out this opinion. While the old bateaux were very flat (some had no dead rise amidships) it has been found that hulls of this model usually fall off too much in tacking and are therefore somewhat dangerous in heavy gales unless a man is tending the main-sheet. There has been a tendency, therefore, to build the more recent bateaux with dead rise their full length. Too much dead rise, however, results in a tender vessel, and

some of the Virginia-built bateaux designed by motor-boat builders have proven this. The *Cordie S.* illustrated here shows about the maximum dead rise permissible in a bateau. Some of the older bateaux were too full forward. This is indicated by their behavior in a head sea, on the wind. The drawback to the sharp bow, however, is the cramping of the foredeck, since the construction used does not permit great flare in the topsides.

The drawings illustrate a good part of the fleet sailing out of Cambridge, Maryland, in 1942-1943. As these bateaux were built over a wide area they serve to show the details of design that mark the chief building sections on the Eastern Shore. The rake of mast in these examples follow no fixed rule; the older boats commonly have more mast rake than the most recently built. Most boatmen believe the rake was used so that the mainsail halyard was over the hatchway so that it could be used in hoisting out. They also believe that excessive rake is not beneficial when sailing on the wind.

All bateaux measured at Cambridge were in reasonably good working condition and only two shown here were abandoned wrecks. Therefore, it is possible to say that the drawings are accurate.

Little remains to be said; when bateaux are new their bottom is not caulked. Caulking is not necessary as the plank is laid very carefully to give a tight inside seam. After the boat is a few seasons old then she usually needs a little caulking. The reason for not caulking a new boat is that it is considered harmful, in herring-bone planking, until the timber has had a chance to develop a normal amount of shrinkage and swelling after seasoning in place.

NOTES ON PLANS
(Taken from Office Journal)

1. Three-sail bateau *Eva* of Cambridge, Maryland. (page 292)

The owner of this bateau (and many watermen in Cambridge) claim this boat was the first 'bateau' or 'skipjack' built in Dorchester County. She was built prior to the date given in the Custom House register, 1890; as the present owner bought her in 1888. She was twice rebuilt, once about 1890 when her rig was changed to schooner and again, about fifteen years later, when her stern was lengthened 3 feet to form a counter. This bateau is one of the very few built with frames, like a round-bottom hull, and planked fore-and-aft. As far as I can discover, only one other bateau was so built. The *Eva* is a very able boat and sails well.

2. Two-sail bateau *Harvey A. Parks.* (page 293)

This bateau, built in 1899, is a good example of the model built at Holland Island. She represents to a great degree the older model of bateau built very widely on the Eastern Shore. It will be noticed that she has no dead rise amidships, being almost flat at the eighth station from the bow. This bateau has a very large rig and sails well. Her sharp bow should be noticed. She has, however, the fault of the flat model; falls off somewhat when coming about. The fore-foot is cross-logged, at right angles to the keelson, for the forward 8 feet of her length. This construction has been described. The after trunk is not a part of the original construction, having been added about 1920. Originally there was a trunk, about 8 feet long, where the forecastle hatch now is located. The *Parks* is a very powerful boat and works well when dredging. When originally built this bateau had a large sunk-platform.

3. Two-sail bateau *Willie L. Bennett.* (page 294)

This bateau is a good example of a medium-size model built in Somerset County, near Deals Island. The builder of this boat built many on the same model, varying but little in dimensions or lines. Inverness, where this bateau was built in 1899, does not appear on most maps as there is no postoffice there. The only postoffice of this name in Maryland is near Baltimore and many watermen believed the *Bennett* had been built at that city by an Eastern Shore builder. However, investigation enabled the location of the builder to be found. The drawing shows the scantlings of this bateau and gives an excellent idea of the construction. The *Bennett* is a fair sailer and dredge boat; she was very well built and finished in a superior manner. She is fairly typical of the better class of bateaux built near Deals Island.

4. Two-sail bateau *Gertrude Wands.* (page 295)

The *Wands* was built by the same builder as the *Bennett* and in the same year. The similarity of the two boats is marked. The *Wands* requires about a half ton of ballast and is a good sailer in light weather. She was an excellent dredge boat; in 1943 she was used as a yacht and owned in Annapolis. She has hemp rigging which in 1943 has been in her over six years. Like the *Bennett* she was well built and finished. Her construction was like that of a bugeye, so far as deck was concerned, rather than

like the usual bateau. The *Bennett* and the *Wands* were both a little too full forward for close-hauled work in rough weather. Both had large rigs. The fore-foot logs are fore and aft; the builder seems to have used two chunks on each side of the keelson in most of his boats. The *Wands* and the *Bennett* were built with flush decks, no sunk-platform was used.

5. Two-sail bateau *Louise* (Handscraper). (page 296)

This was one of a large number of small bateaux that once existed at Cambridge, even after power winders came into use. Most of these were around 35 feet on deck and were used in rivers, bays and other semi-protected waters. Most of the old bateaux of this class were similar to the *Louise* in model though, toward the end of the period of their use, some were built with dead rise their full length. In 1942 colored handscraper crews were working out of Deals Island in 25-foot and 28-foot crabbing bateaux, many of which were reduced copies of the *Louise* in most respects.

The 35-foot handscrapers had self-bailing cockpits (or 'sunk-platforms'). The *Louise* drawing shows the sweep-locks, and the dredge-line chocks mentioned earlier as commonly fitted in small bateaux. Fore-foot was cross-logged for about 4 feet 6 inches abaft the stem. Boat was very heavily rigged and was a very good sailer in moderate weather. Boats of this model, with big rigs, show an amazing ability in light airs. There are still a few bateaux of this type and model still in use (1943). A yacht on this model was built at Hoopers Island in 1940. Small bateaux like the *Louise*, usually have the cabin trunk made so that it can be removed when desired.

6. Two-sail bateau *Geneva May*. (page 297)

The *Geneva May* represents a bateau at the other extreme, in size, from the *Louise*. The *Geneva May* was built at Wenona, on the lower end of Deals Island, Maryland, in 1908 by a builder named Noble. This man did most of his building, however, at his home in Oriole, a small village in the mainland opposite Deals Island. The *Geneva May* was built in a very superior manner and was designed for not only oyster dredging, but as a small freighter. The *Geneva May* is by no means the largest bateau; as the following list shows:

Appollo	55.8 x 19.8 x 5.5	1914	Solomons Island
Carrie Mears	53.5 x 16.3 x 3.5	1902	Pocomoke City, Md.
Donna Forester	55 x 18.3 x 5.2	1911	Oriole, Md.
E. P. Collier	52 x 17.9 x 4.3	1910	Deals Island
Eben	54.3 x 18.7 x 5.2	1911	Oriole, Md.
Eloise	54 x 18.8 x 4.9	1911	Oriole, Md.
Flora A. Price	56.2 x 18.4 x 4.8	1910	Champ, Md.
Fulton T. Mister	52.8 x 18.1 x 4.5	1910	Deals Island, Md.
Esther W.	55.6 x 20.1 x 55	1914	Oriole, Md.
Florence Louise	58.1 x 19.6 x 44	1924	Crisfield, Md.
Harry F. Albaugh	56.4 x 18.4 x 4.8	1910	Champ, Md.
Lady Eleanor	58 x 18.8 x 5.2	1915	Oriole, Md.
Lottie Bell	53 x 18 x 4.8	1910	Deals Island, Md.
Mamie Mister	56.2 x 18.4 x 4.8	1910	Champ, Md.
Nellie L. Byrd	53.6 x 16.7 x 4.8	1911	Oriole, Md.
Rengold Bros.	56 x 19.2 x 5.3	1911	Oriole, Md.
Robert L. Webster	60 x 20.2 x 5.8	1915	Oriole, Md.

Robert W. Cole	54.7 x 18.3 x 5.1	1911	Oriole, Md.
Ruther A. Thomas	56.4 x 19.7 x 5.6	1914	Oriole, Md.
Thomas Clyde	54.5 x 18.2 x 5.3	1911	Oriole, Md.
Vernon Daniel	56.2 x 18.4 x 4.8	1910	Champ, Md.

The *Robert L. Webster,* thirty tons, is the largest bateau and is nearly 70 feet on deck, since she has a counter. Many of the large bateaux have counters which makes their over-all length much greater than shown in the register. The *Lady Eleanor* is one of the handsomest of the large bateaux now afloat. It will be noticed, in the list, that the bulk of the large bateaux were built near Deals Island, at Oriole, and Champ, or on the island. Champ, like Oriole, is on the mainland, and some builders worked in all three places. It will also been seen that the larger number of these big vessels were built between 1910 and 1915. During this period Deals Island was very prosperous and these large bateaux were money-makers. Most of the large bateaux can still make a good income for their owners and, when required, can carry loads of lumber, farm produce, or other freight. Many of the large bateaux are very good sailers in spite of the ugliness of the majority. The *Geneva May* is considered a very satisfactory dredge boat and has had a good reputation as a sailer. She has a beautifully finished cabin, for a bateau. This model is now considered too flat on the bottom and too full in the ends. A great many bateaux were built on the general lines of the *Geneva May.*

7. Two-sail bateau built at Taylors Island 1902-3. (page 298)

This drawing is taken off a builder's half model and drawn from dimensions and description given by the builder. She is a good example of a bateau of her period. The davits were not in place when the boat was first built. She was a good vessel but was too full at the bow. This bateau was changed to a power boat. The builder was a noted schooner builder in Dorchester County, and built a number of pungies.

8. Three-sail bateau *Virgil G. Dean.* (page 299)

This bateau seems to have been typical of the three-sail boats built at Bishop's Head and vicinity. The *Dean,* however, was raised 6 inches and the drawing shows her with the increased depth. She originally had her trunk forward and had a sunk-platform. The *Dean* was very strongly built and well finished. She is considered a very good seaboat and sails well in strong winds. Owner finds she lacks power in light winds. The bateau is a very handsome boat; and is said to have been very even prettier before being raised upon. This hull is said to be too full forward and to have too much curvature in the profile of her chine forward, for speed.

9. Three-sail bateau *Thelma Roberts.* (page 300)

This bateau was, with her sister the *Oceanic,* considered a very fine three-sail bateau. The *Roberts,* particularly, had a great name for speed and for ability to carry sail. She was very handsome but was lightly and rather weakly built. Keelson and strong-backs were too light; the center-board cases gave some trouble in both boats. The *Roberts* was very weatherly and had a very lofty rig. Her model was considered one of the best of the old type of lines. The stern construction has been described under 'round sterns.' Very few three-sail bateaux had this type of stern. The *Oceanic*

came out with the same stern but when rebuilt had it removed in favor of a square stern of the usual form in a bateau. The *Oceanic* was also raised 6 inches and her masts were lengthened. The *Roberts* and the *Oceanic* are now (1943) dead but the wreck of the former shows the beauty of model and general design.

10. Two-sail bateau *Albatross*. (page 301)

This fine bateau has been drawn up to show her as built, and as raised upon. When originally built at Cambridge in 1899 she was intended both for oystering and crabbing. Because of her very low sides, however, she had very little room below. Hence, she was raised upon the unusual amount of 12 feet. When first built, the *Albatross* was considered a very fast sailer but since being raised upon her speed was decreased. She requires some ballast to overcome the affects of the increased windage of her high sides and great flare. Generally speaking, counter-stern bateaux are not usually as fast as those with outboard rudders but there have been some notable exceptions.

11. Two-sail bateau *Lena Rose*. (page 302)

This bateau has been copied in two newer bateaux owned at Cambridge. The owner of the *Lena Rose* was noted for his sailing skill and so has procured a big reputation, in racing, for this boat. When light she sails very well if properly trimmed. Loaded, she is not fast. She is well but very lightly built. Her stern is fore- and-aft planked abaft station number ten, and so she has the bottom of her transom shaped with a hollow curve. Her best sailing trim is slightly by the head so that the rather marked hump in her run at station number ten is brought to the water-line. Except for this she is a well-modeled bateau, though by no means a pretty one. The *Joy Parks* was built on the same general model, by the builder of the *Lena Rose*, but is even uglier and has the same sailing habits. The bowsprit is shaped with a V section in these boats, somewhat in the same manner as in the old schooner yachts of the seventies and early eighties. The fore-foot of the *Rose* is vertically staved, with the fore end of the keelson dubbed off fair and exposed. The finish of this boat, like most Virginia-built bateaux of recent years, is not very high.

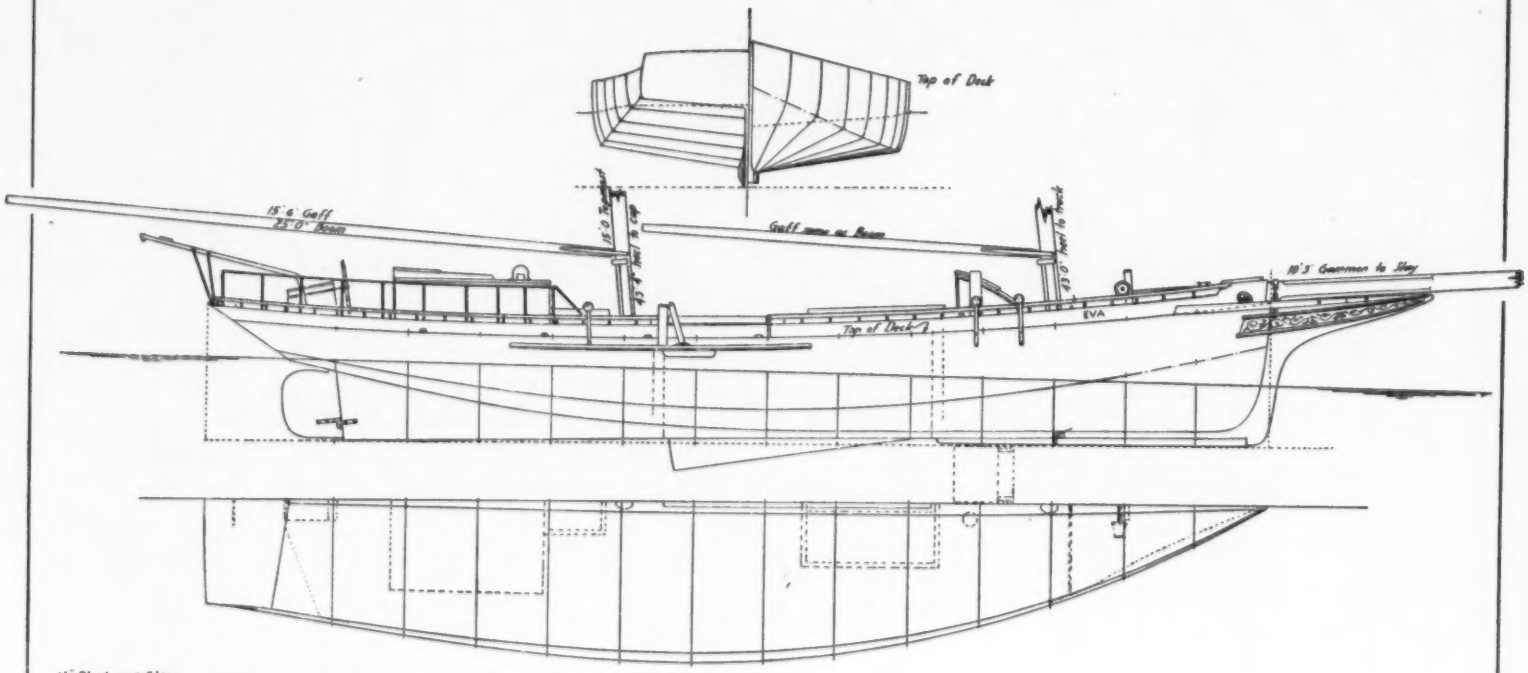
12. Two-sail bateau *Cordie S.* (page 303)

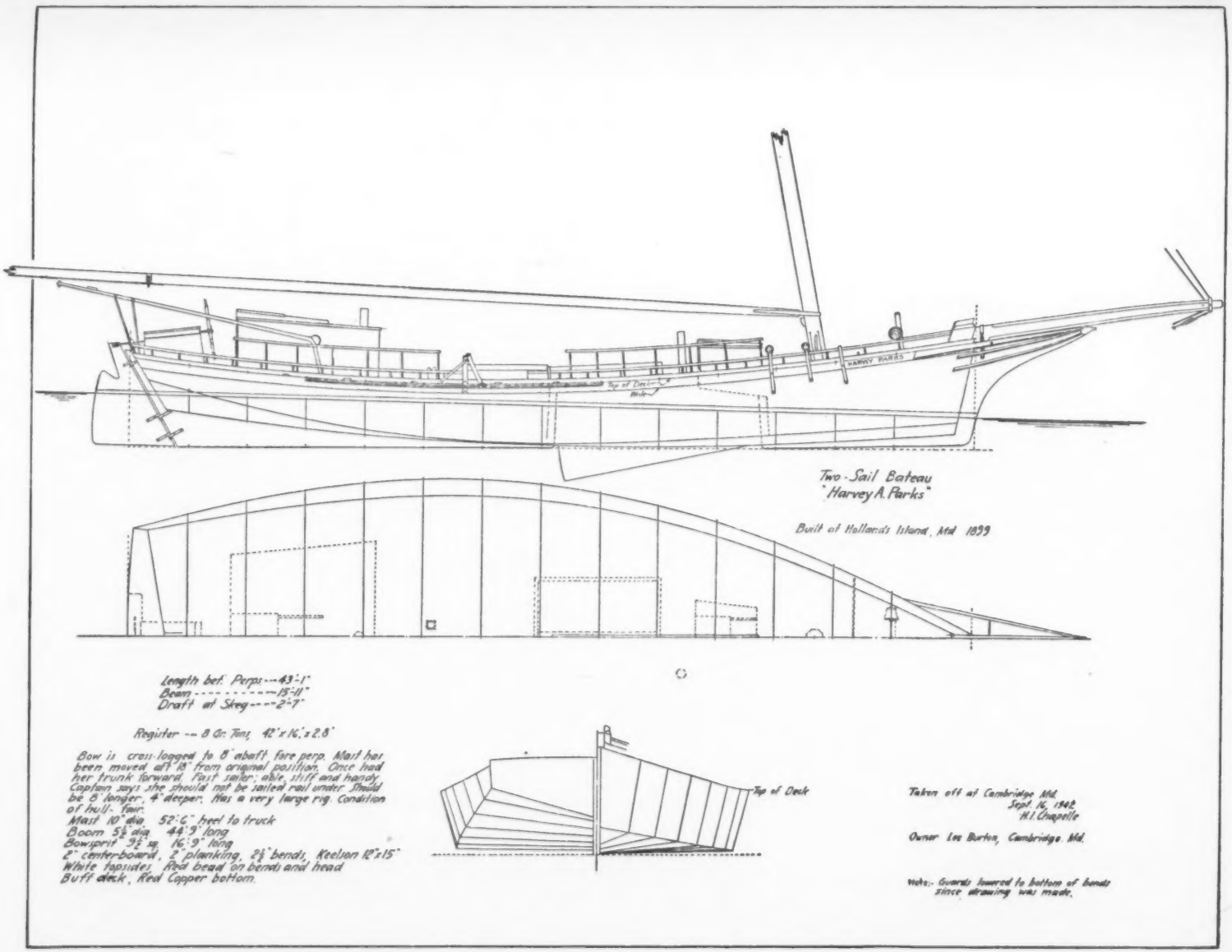
This is another Virginia-built bateau owned at Cambridge. She, like the *Lena Rose*, is not handsome but she is considered a good model for a working boat. Her owner thinks her ugly and could not undestand why anyone would go to the trouble of taking off her lines. The *Cordie S.* is a good all-round boat though her run is a little too full to allow her to be a crack racer in the Work Boat Races. Many of the features of model and construction found in the Virginia-built bateaux can be seen in both the *Cordie S.* and *Lena Rose*. Most watermen think the *Cordie S.*, with a flatter run, would be a first class model. She is weatherly, stiff, and a good seaboat. She sails fastest in light winds, like almost all of the Virginia-built bateaux having relatively great dead rise. Fore-foot is vertically staved. The heavy stem-piece, faired with the side, is typical of most bateaux built south of Crisfield.

Three Sail Bateau "Eva" of Cambridge Md.

Built at Cambridge Md.
Chas. Lecompte, owner

Length bet perps 44'2"
Beam 13'4"
Draft 3'4"
7 tons gross


Top of Deck
15'6" Gaff
25'0" Boom
Gaff same as Boom
10'3" Gaff to Peak
10'3" Gaff to Peak
10'3" Gaff to Peak

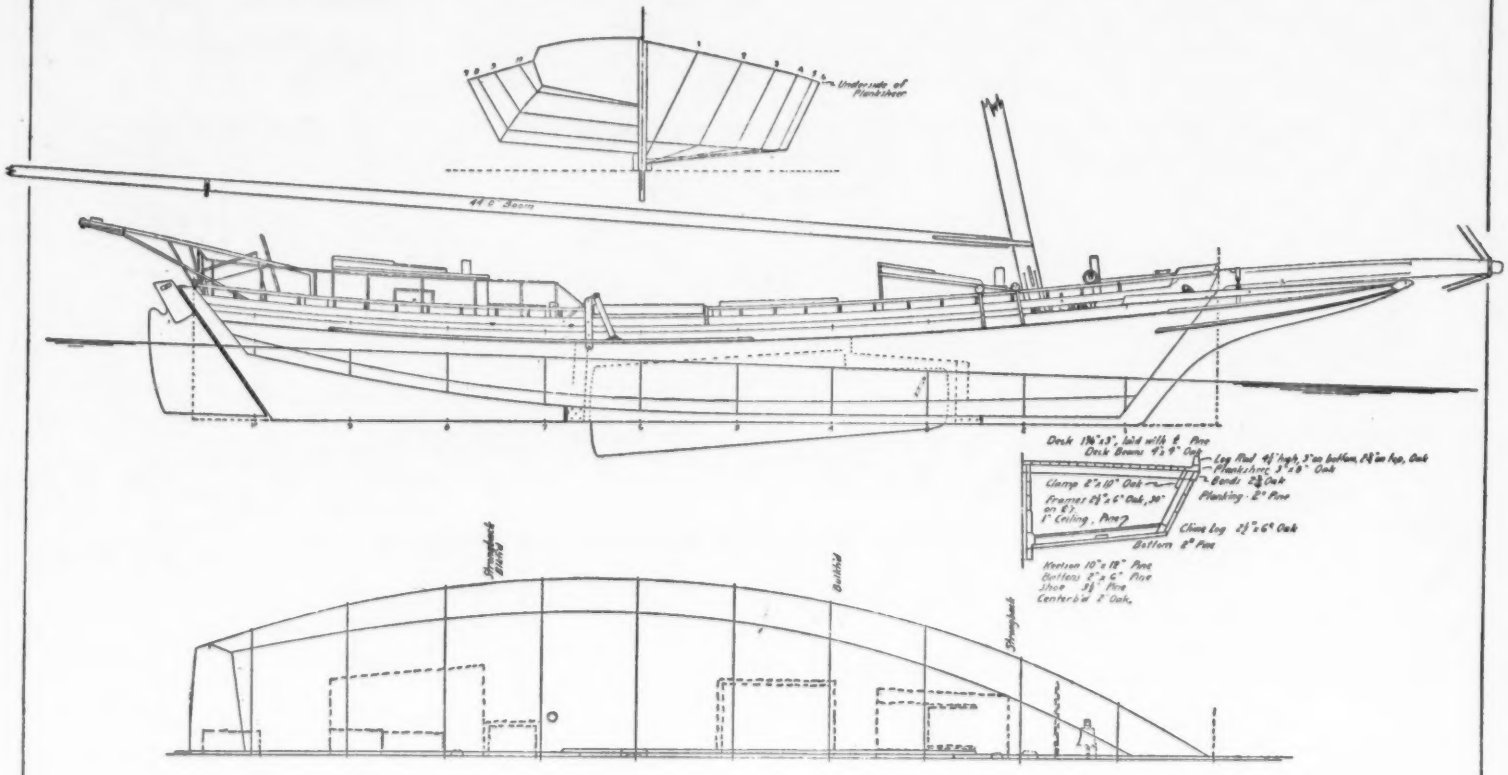

Two-Sail Bateau
"Harvey A. Parks"
Built at Holland's Island, Md 1899
Length bet. Perps.---43'-1"
Beam----15'-11"
Draft at Skeg---2'-7"
Register -- 8 Gr. Tons 42'x16.'x2.8'
Bow is cross-logged to 8' abaft fore perp. Mast has been moved aft 18" from original position. Once had her trunk forward. Fast sailer; able, stiff and handy. Captain says she should not be sailed rail under. Should be 8' longer, 4' deeper. Has a very large rig. Condition of hull: Fair.
Mast 10" dia. 52'-6" heel to truck
Boom 5½" dia. 44'-9" long
Bowsprit 9½" sq. 16'-9" long
2" center-board, 2" planking, 2½" bends, Keelson 12"x15"
White fastades, Red Bead (on bends) and head
Buff deck, Red Copper bottom.
Top of Deck
Taken off at Cambridge Md.
Sept. 16, 1942
H.I. Chapelle
Owner Lee Burton, Cambridge, Md.
Note:- Guards lowered to bottom of bends since drawing was made.

Two-sail bateau *Harvey A. Parks*. Drawing by Howard I. Chapelle. Scale: 1/8" = 1'

Two-sail Bateau "Willie L. Bennett."

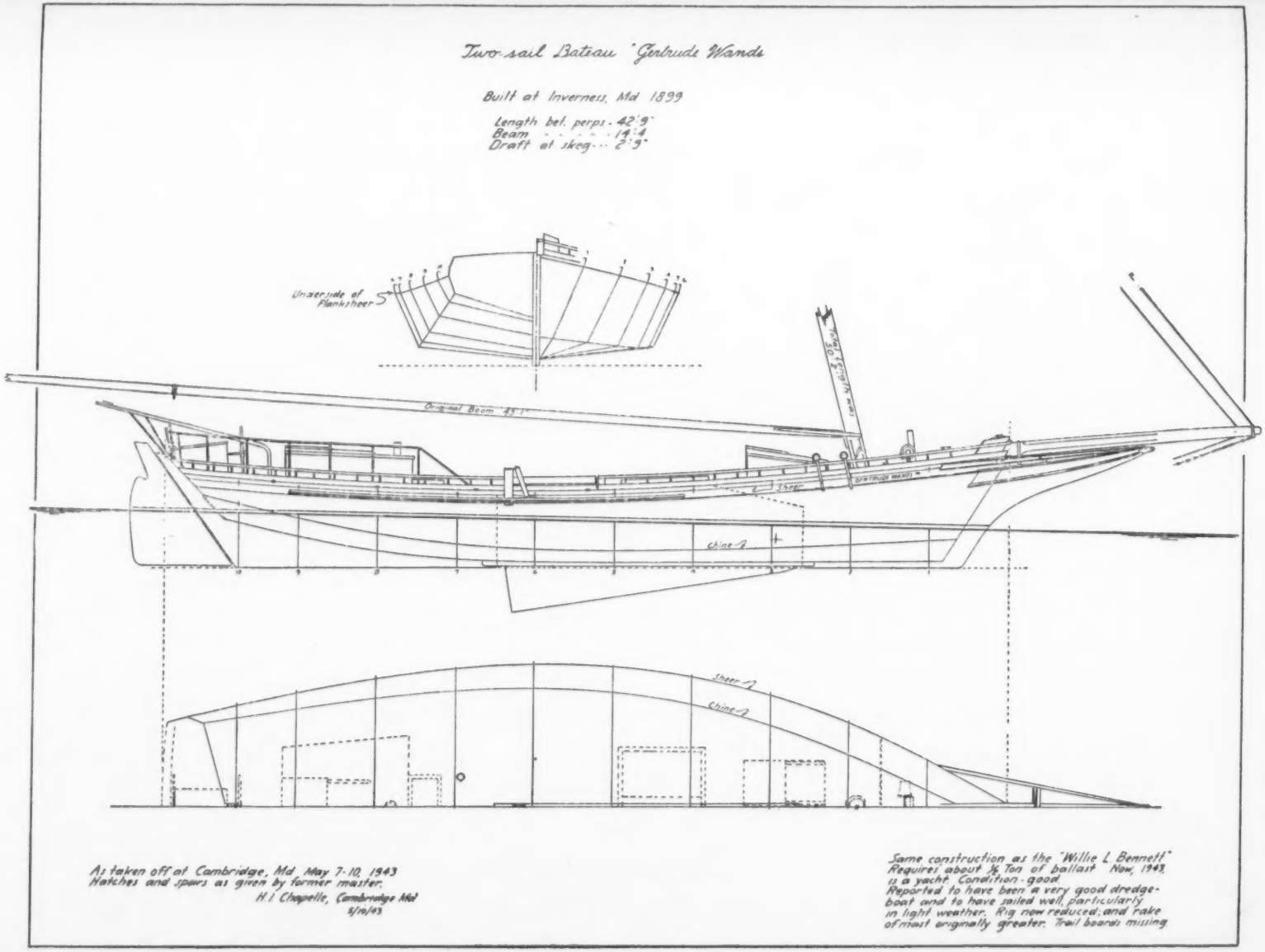
Built 1939 at Inverness (Baltimore) Md.
8 Gr. Tons 42.6' x 14.3' x 3.4'

Length bet perps.	42'6"
Beam	14'6"
Draft	3'0"



Excellent Dredge boat. Fair sailer and seaworthy
Very well built Condition, when taken off Nov 27, 1942,
at Cambridge Md. Poor.
Note Too full forward

Two-sail Bateau "Gertrude Wands

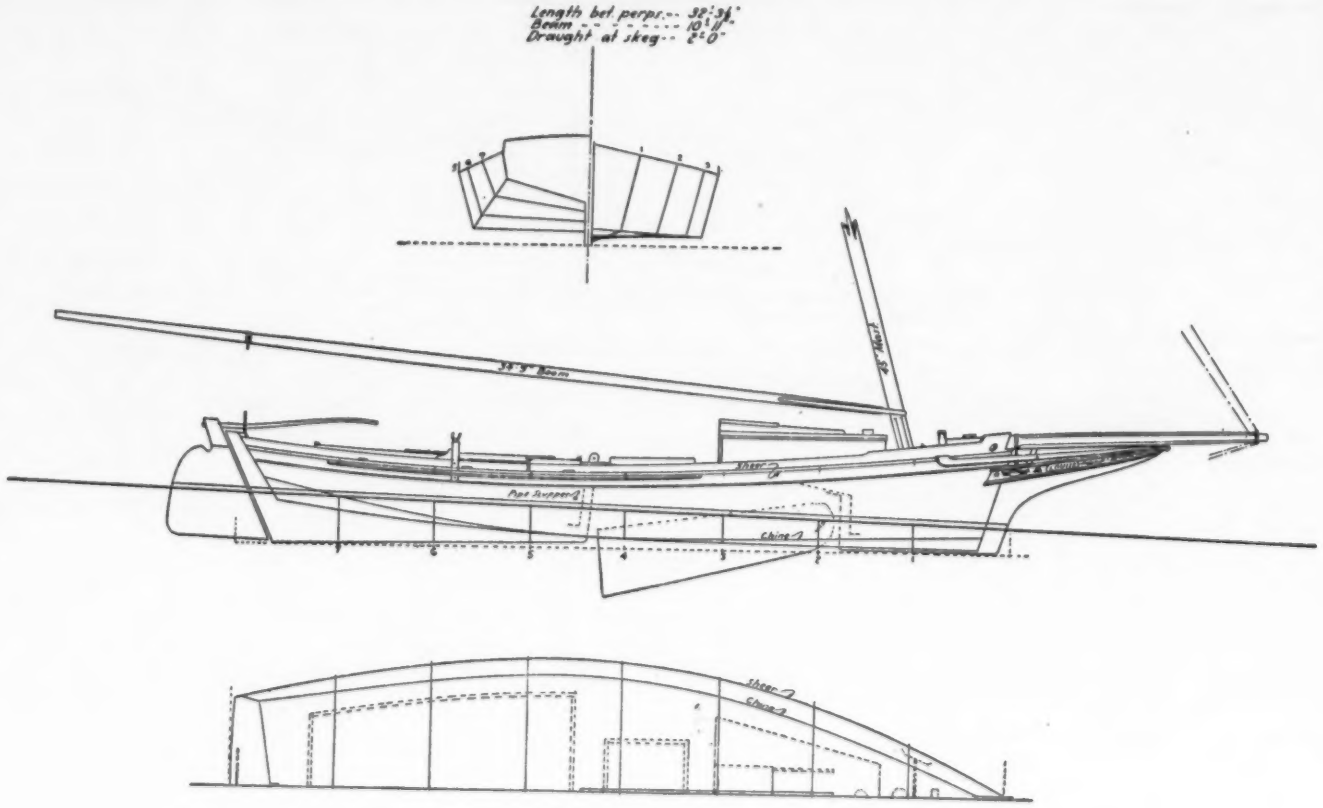

Two-sail Bateau "Gertrude Wands
Built at Inverness, Md 1899
Length bet. perps - 42'9"
Beam . . . . . 14'4
Draft at skeg . . . 2'9"
Underside of Plankshear
Original Boom 45'
Sheer
Chine
Sheer
Chine
As taken off at Cambridge, Md May 7-10, 1943
Hatches and spars as given by former master.
H.I. Chapelle, Cambridge Md
5/10/43
Same construction as the "Willie L Bennett"
Requires about ½ Ton of ballast Now, 1943,
is a yacht. Condition - good.
Reported to have been a very good dredge-
boat and to have sailed well, particularly
in light weather. Rig now reduced; and rake
of mast originally greater. Trail board missing

Two-sail bateau *Gertrude Wands*. Drawing by Howard I. Chapelle. Scale 1/8" = 1'

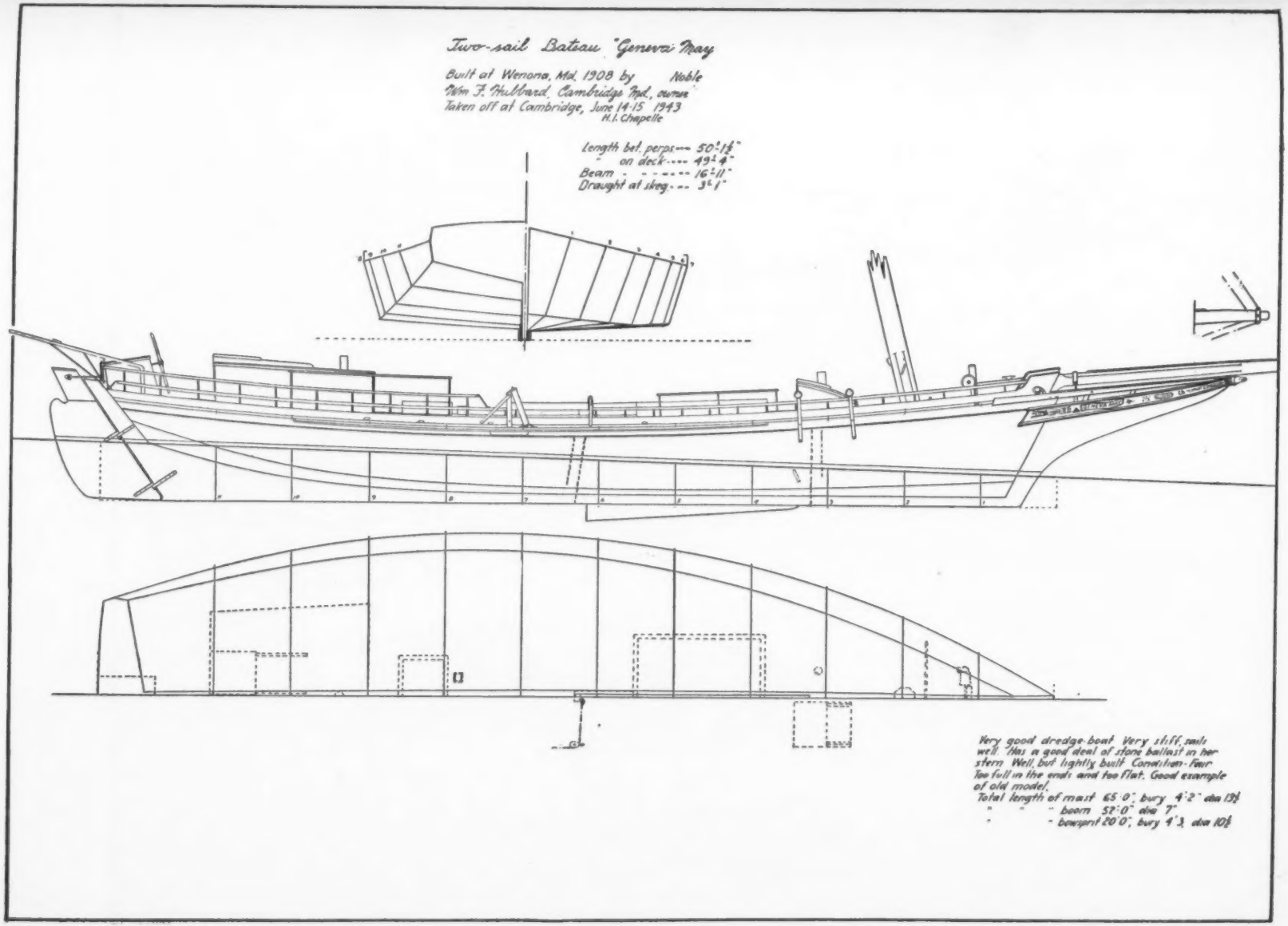
Old "Hand-scraper" Bateau 'Louise'

Built on the Little Choptank about 1897
Taken off near Hudson Md. May 1942
N.I Chapelle

Length bet perps.-- 32'-3½"
Beam -- " " ----- 10'-11"
Draught at skeg-- 2'-0"



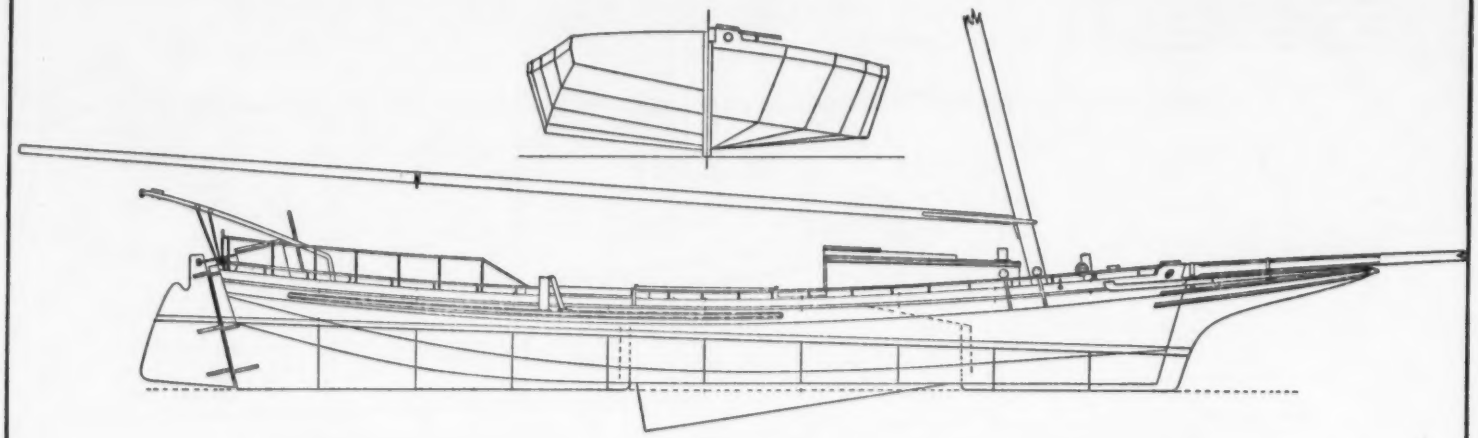
Type once popular at Cambridge for hand-dredging. 30 to 32' in length. "Winders" in cockpit. Also used for crabbing. Drawing made from abandoned wreck. No Shrouds. Said to have been a good sailer in moderate weather. Heavily built. Log Keelson. Condition - Rotten - Fastenings gone.

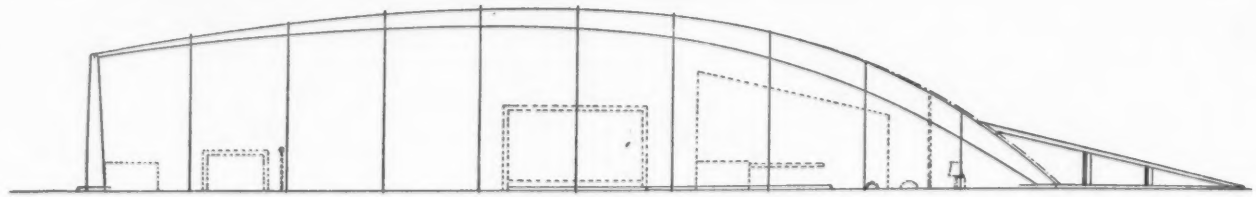

Two-sail Bateau "Geneva May"
Built at Wenona, Md. 1908 by Noble
Wm F. Hubbard, Cambridge Md., owner
Taken off at Cambridge, June 14-15 1943
H.I. Chapelle
Length bet. perps — 50'-1½"
" on deck — 49'-4"
Beam — — — — 16'-11"
Draught at skeg — 3'-1"
Very good dredge-boat. Very stiff, sails well. Has a good deal of stone ballast in her stern. Well, but lightly built. Canadian-Fine. Too full in the ends and too flat. Good example of old model.
Total length of mast 65'0", bury 4'2" dia 13½
" " - boom 52'0" dia 7"
" - bowsprit 20'0", bury 4'3, dia 10½

Two-sail bateau *Geneva May*. Drawing by Howard I. Chapelle. Scale: 1/8" = 1'

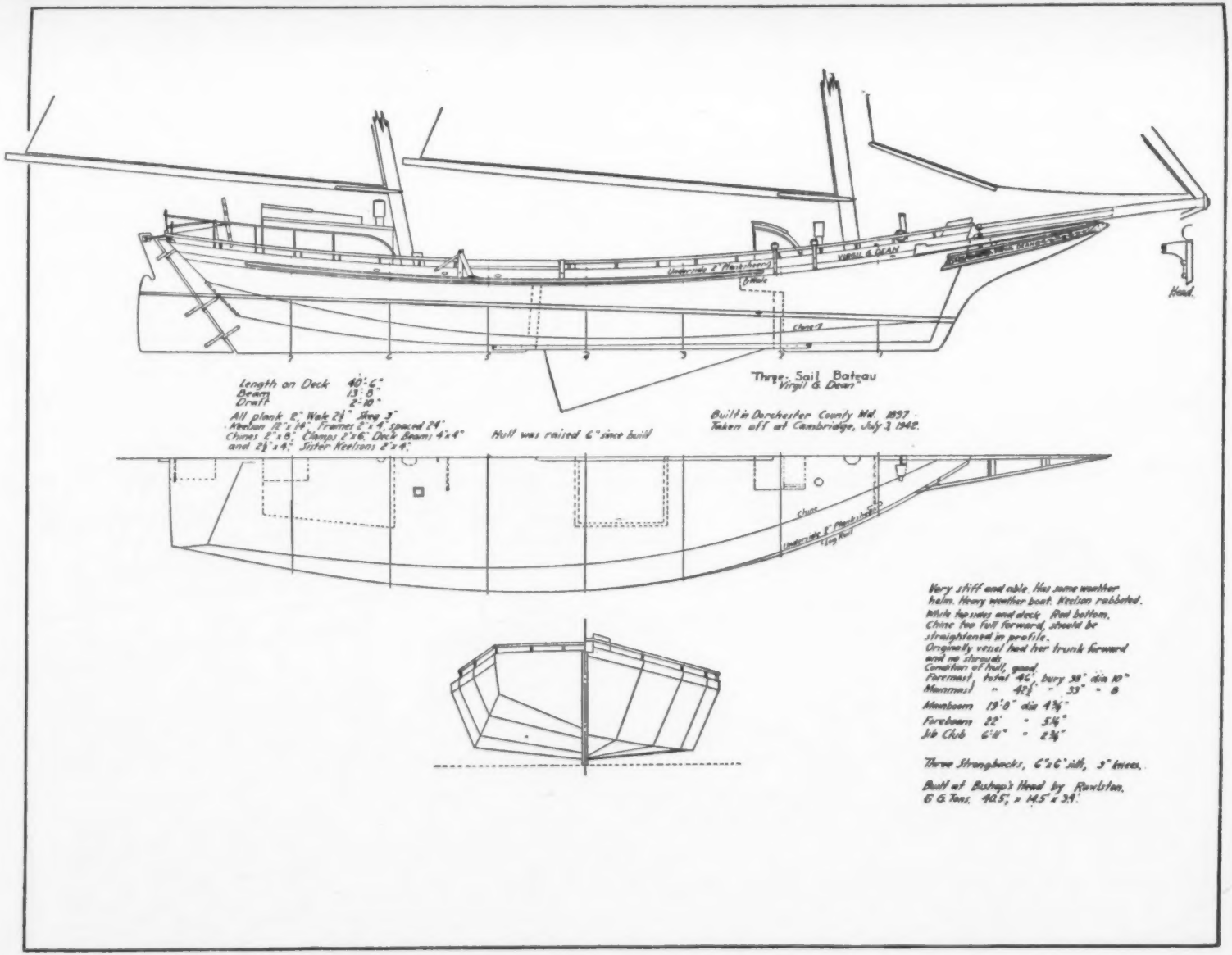
Two-sail Bateau built at Taylor's Island, Md.
by Spicer about 1902-3

Supposed to be the "Lillie G. Spicer". Drawing made from builder's model and dimensions.
H.I. Chapelle, Cambridge Md.
Apr. 2 1943





Length on Deck -- 40'-0"
Beam ..... 15'-0"
Draft ..... 2'-9"


Three-Sail Bateau
Virgil G. Dean
Length on Deck 40'-6"
Beam 13'-8"
Draft 2'-10"
All plank 2" Wale 2½" Sheer 3"
Keelson 12"x14" Frames 2"x4" spaced 24"
Chines 2"x8" Clamps 2"x6" Deck Beams 4"x4"
and 2½"x4" Sister Keelsons 2"x4"
Hull was raised 6" since built
Built in Dorchester County Md. 1897
Taken off at Cambridge, July 3 1942.
Very stiff and able. Has some weather
helm. Heavy weather boat. Keelson rabbeted.
White top sides and deck. Red bottom.
Chine has full forward, should be
straightened in profile.
Originally vessel had her trunk forward
and no shrouds.
Condition of hull, good.
Foremast, total 46', bury 38" dia 10"
Mainmast " 42½' " 33" " 8
Mainboom 19'8" dia 4¾"
Foreboom 22' " 5¼"
Jib Club 6'11" " 2¾"
Three Strongbacks, 6'x6" sift, 3" knees.
Built at Bishop's Head by Rawlston.
G.G. Tons. 40.5', x 14.5" x 3.9'.

Three-sail bateau *Virgil G. Dean*. Drawing by Howard I. Chapelle. Scale: 1/8″ = 1′

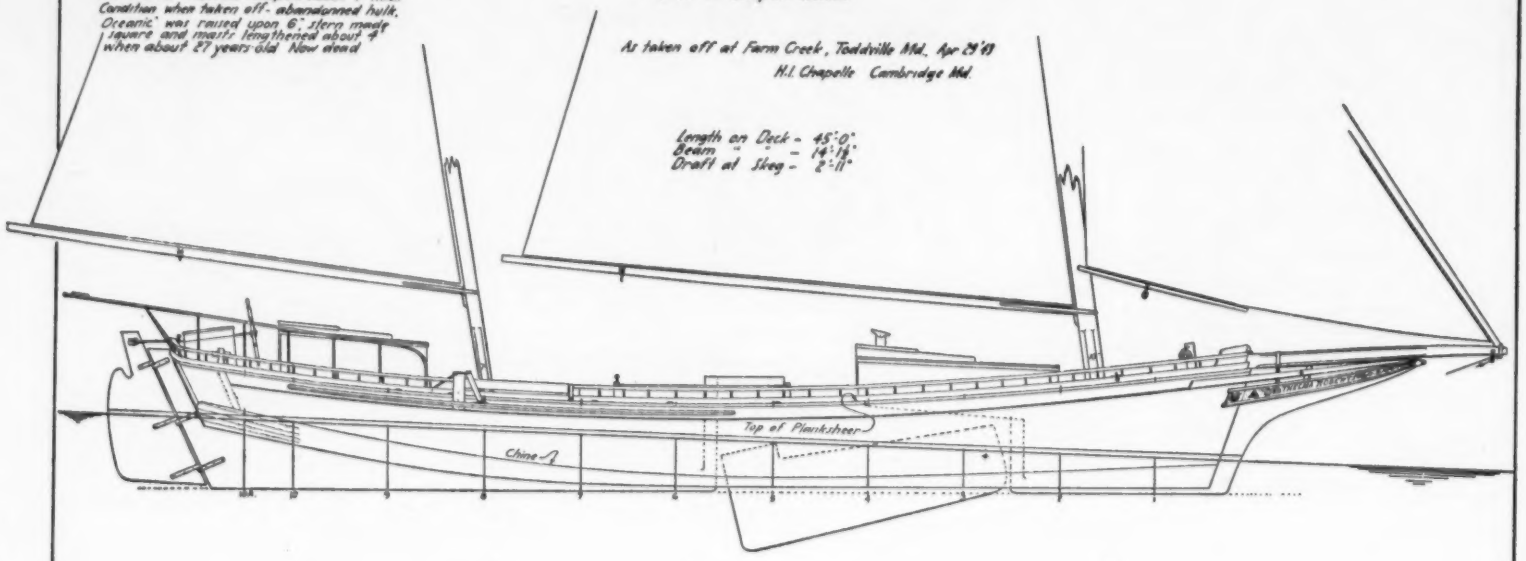
"Oceanic" on same moulds
No shrouds when built. After trunk added
Noted for sail carrying and heavy weather
sailing. Keelson was too shallow
Stern made of hewn 4" flitch laid up bread-
and-butter fashion - shaped about 4" thick
Condition when taken off - abandonned hulk.
Oceanic was raised upon 6" stern mould
| square and mast's lengthened about 4'
when about 27 years old. Now dead

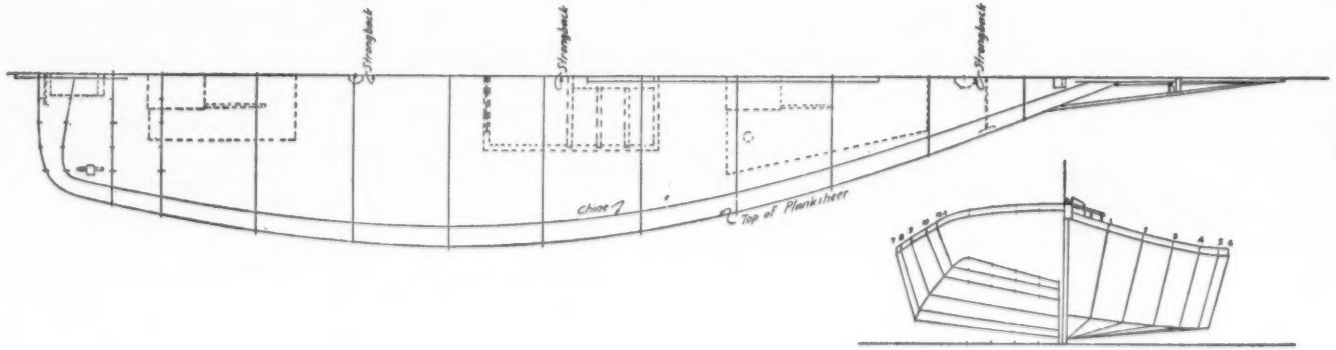
Three-sail Bateau "Thelma Roberts"

Built at Hooper's Island

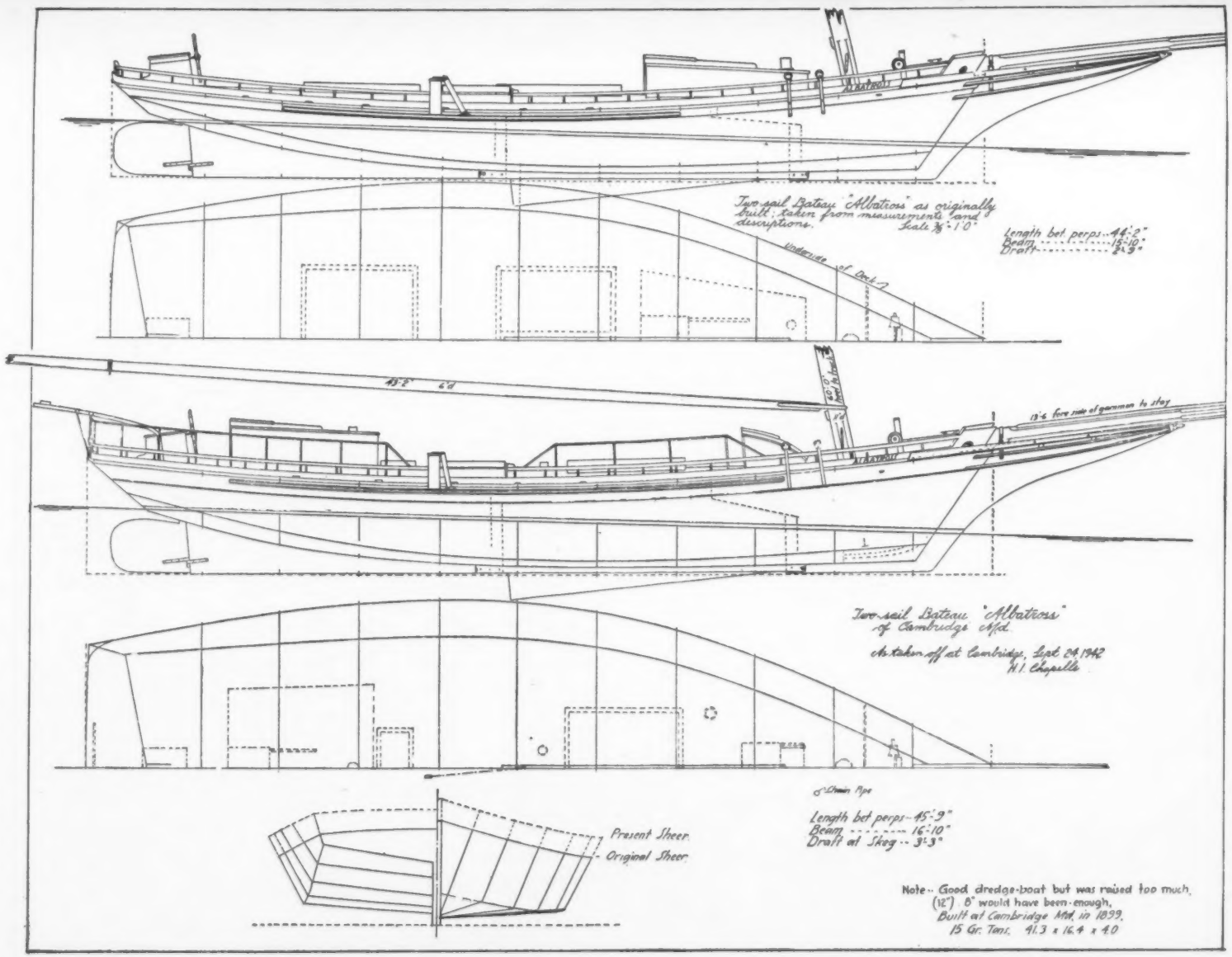
As taken off at Farm Creek, Toddville Md. Apr 29'39
H.I. Chapelle Cambridge Md.

Length on Deck - 45'-0"
Beam " " - 14'-11"
Draft at Skeg - 2'-11"





Three-sail bateau "Thelma Roberts" Drawing by Howard I. Chapelle Scale: 1/4" = 1'-0"

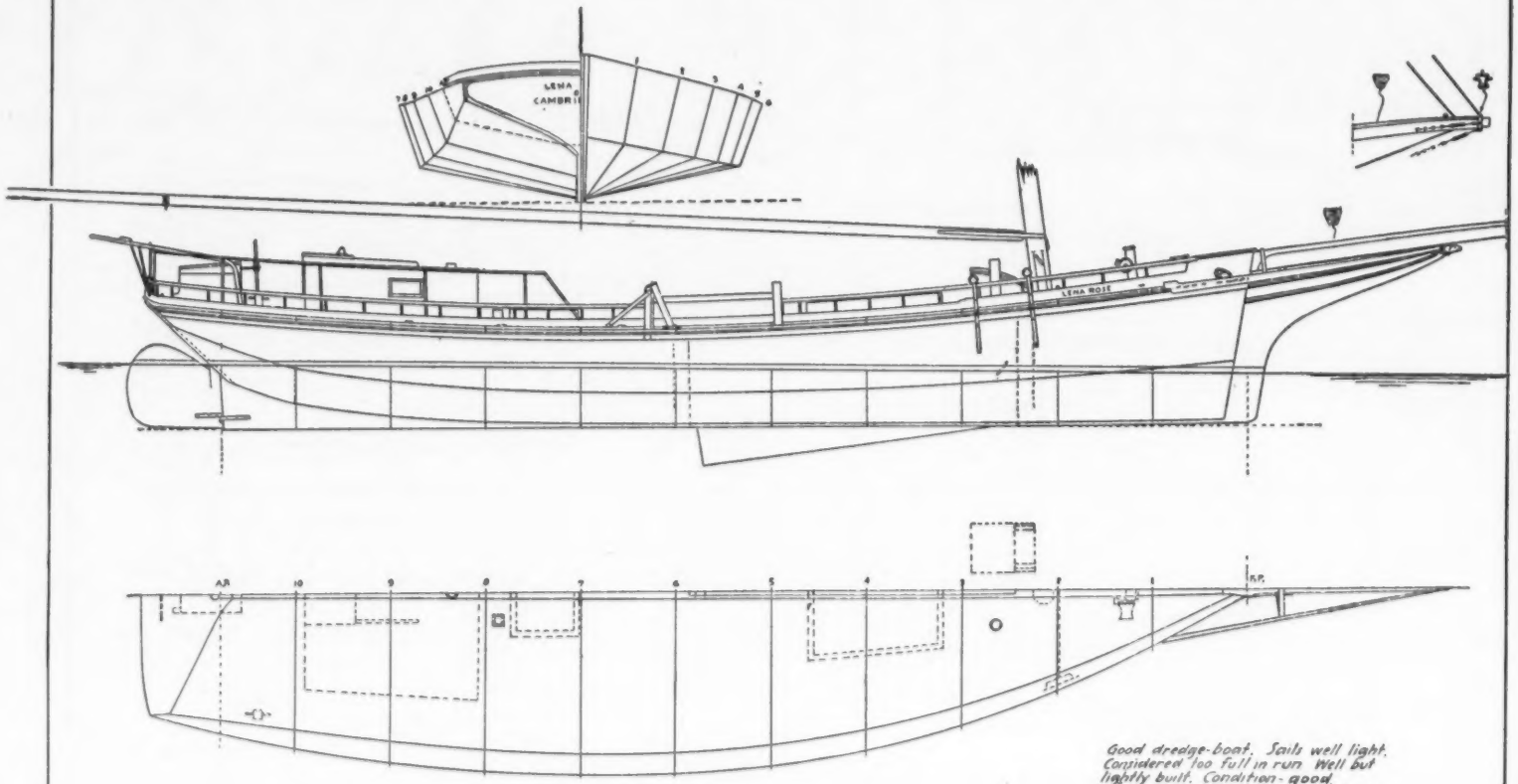

Two-sail bateau "Albatross" as originally built; taken from measurements and descriptions.
Scale 3/8" : 1'-0"
Length bet. perps.--44'-2"
Beam ..... 15'-10"
Draft ..... 3'-9"
Underside of Deck
Albatross
Two-sail Bateau "Albatross" of Cambridge Md.
As taken off at Cambridge, Sept. 24, 1942
H.I. Chapelle
Length bet. perps--45'-9"
Beam ..... 16'-10"
Draft at Skeg -- 3'-3"
Present Sheer
Original Sheer
Note -- Good dredge-boat but was raised too much. (12") 8" would have been enough.
Built at Cambridge Md. in 1899.
15 Gr. Tons. 41.3 x 16.4 x 4.0

Two-sail bateau *Albatross*. Drawing by Howard I. Chapelle. Scale: 1/8" = 1'

Two-sail Bateau Lena Rose

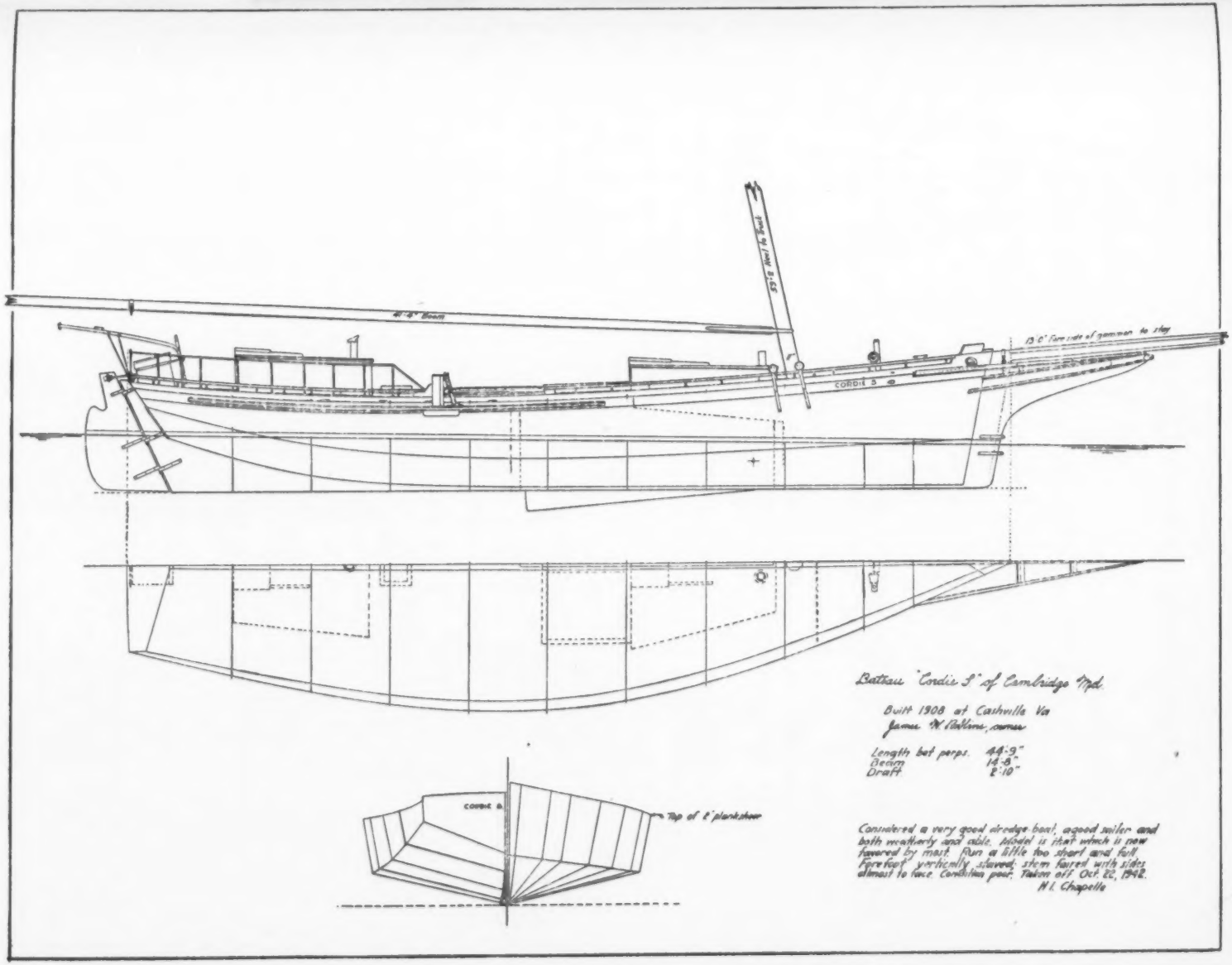
Built 1924 at Parksley, Virginia
As taken off, Cambridge Md. May 26, 1943
H. I. Chapelle

Length overall on deck 46'-6" Beam 15'2"
" between perps 43'-1" Draft 2'8"

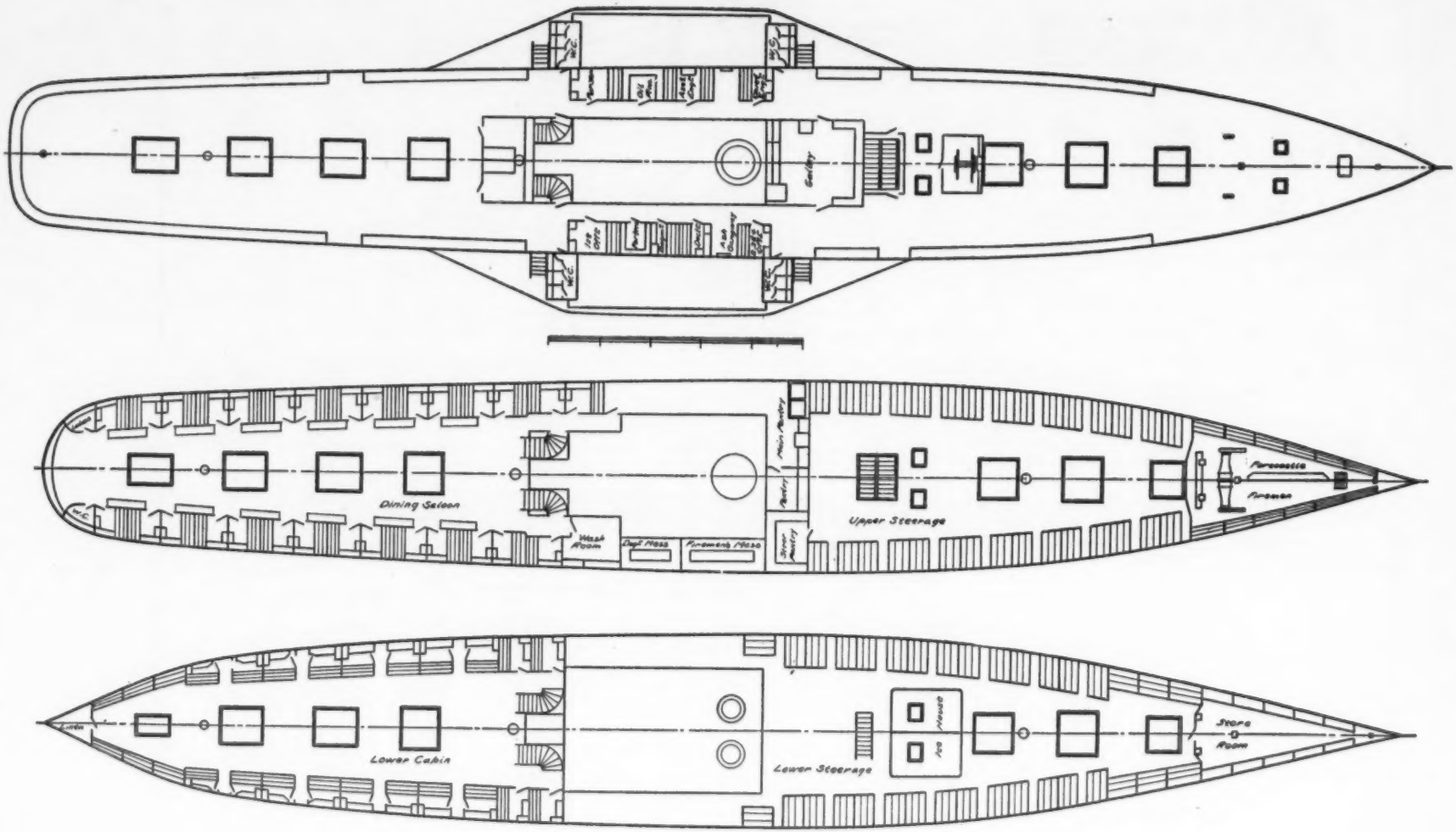


Good dredge-boat. Sails well light. Considered too full in run. Well but lightly built. Condition - good. Stayed fore foot with keelson showing. Same builder as the "Joy Parks."

"Two-sail Bateau Lena Rose" Drawing by Howard I. Chapelle, Scale 1/4" = 1'


Bateau "Cordie S" of Cambridge Md.
Built 1908 at Cashville Va
James W Watkins, owner
Length bet perps. 44'9"
Beam 14'8"
Draft 2'10"
Considered a very good dredge boat, a good sailer and both weatherly and able. Model is that which is now favored by most. Run a little too sharp and full forefoot vertically shaved; stem faired with sides almost to face. Condition poor. Taken off Oct. 22, 1942.
H.I. Chapelle

Two-sail bateau *Cordie S.* Drawing by Howard I. Chapelle. Scale: 1/8" = 1'



Steamship *George Law*. Deck and Cabin Plans. Drawing by Cedric Ridgely-Nevitt.

Steamship *George Law*. Deck and Cabin Plans. Drawing by Cedric Ridgely-Nevitt.

The United States Mail Steamer George Law

BY CEDRIC RIDGELY-NEVITT

LIKE the *Home*, the *Arctic* and the *Morro Castle*, the *Central America*, ex-*George Law* is one of that unfortunate group of vessels whose name is remembered because of a disastrous end to an otherwise uneventful career. Thus she achieved lasting fame when she foundered on 12 September 1857 with the loss of 423 lives and $1,219,189 in California gold.

The *George Law* was ordered in February 1852, but, when her keel was laid, 25 March of the same year, she was simply Hull 71 at the shipyard of William H. Webb located in New York on the East River at the foot of Sixth Street. She was an example of the best tradition of American shipbuilding, for, in that yard, Isaac Webb had given not only his sons, William H. and Eckford Webb, but also John W. Griffiths and Donald McKay, their earliest training in the art and science of shipbuilding. Isaac Webb, in turn, had served his apprenticeship with Henry Eckford, the most brilliant and original of our early nineteenth-century shipbuilders.

William H. Webb was both a prolific and an extremely versatile shipbuilder whose name is remembered, all too frequently, simply because of his most successful clippers, the *Comet*, the *Challenge* and the *Young America*. Starting with Hull 1, the brig *Malek Adhel*, in 1840, he produced packet ships, fishing schooners, clippers, ironclads, revenue cutters, ocean steamships, tugboats, and Long Island Sound steamers until the year 1869 when he retired from shipbuilding with the completion of Hull 135, the ship *Charles H. Marshall*. The following list of hull numbers illustrate the extent of his business during the time the *George Law* was under construction:—

Hull No.	*Name*	*Type*
65	*James Adger*	Steamship
66	*Plandome*	Schooner
67	*Manhasset*	Schooner
68	*Annawam*	Ship

69	*Robert Mills*	Bark
70	*Australia*	Liverpool Packet
71	*George Law*	Steamship
72	*Flying Dutchman*	Extreme Clipper
73	*Augusta*	Steamship
74	*Reemplazo*	Schooner
75	*Volante*	Brig

The *George Law* was the eleventh of twenty-five large ocean steamships built at the Webb yard. These can be divided into three general groups, first the early ships, two-decked vessels about 250 feet long with high bulwarks, clipper bows, heavy sterns, either side-lever or inclined engines, and a ratio of length to breadth of about six to one. The *United States*, 1847, and the *Tennessee*, 1848, are good examples. The *United States* even shows traces of the packet-ship influence in her lines, particularly in the shape of the flare and full deck line forward. It is interesting to note that a considerable furore was created in shipbuilding circles when Webb decided to build her with a flat bottom and no dead rise in order to obtain as much room as possible for engines and coal; this innovation proved completely successful and was followed in most American steamships built thereafter.

The second class of steamers from the Webb yard had finer lines, a ratio of length to breadth of six and a half to one, and the number of decks increased to three in order to accommodate increasing demands for passenger space. Bulwarks began to give way to open rails, superstructures increased in size, sail plans diminished and the bowsprit became a short spike. Oscillating and walking beam engines began to replace side-lever and inclined cylinders. The *San Francisco, Golden Gate,* and *George Law* are representative examples of this stage in the development of both the Webb vessels and the American steamship in general.

The final group of wood ocean steamers differed widely from the *George Law* and her sisters; passenger quarters burst out of the confining hull and spread over the ship in a large superstructure, lengths increased to 350 feet, the length-beam ratio to seven, while the stem became plumb and the walking beam engine almost a standard. The *Henry Chauncey, Golden City,* and *China* are examples of Webb's last period, as they are of the highest development of the wood side-wheel steamship.

Launched on 28 October 1852, Hull 71 was named, at a later date, *George Law,* after the moving spirit of the United States Mail Steamship Company. Incorporated in 1848, this organization immediately ordered

two large vessels to carry the mails between New York and the Isthmus of Panama. Smith and Dimon built the *Georgia*, a particularly ugly vessel, 250 feet, 7 inches by 48 feet by 25 feet, 6 inches. John W. Griffiths was responsible for her lines and gave her much more beam than was usual for a vessel of this size. Webb wrote a terse comment 'and a beast she was,' but it may have been inspired by professional rivalry. The *Ohio*, from Bishop and Simonson's shipways, was generally similar except for a reduced beam. As required by their owner's mail contract, these were built under naval supervision, commanded by officers of the United States Navy, and designed for rapid conversion to naval auxiliaries in time of war. A smaller ship, the *Falcon*, originally built for coastwise service between New York and New Orleans, was purchased and used to open the service to Chagres in December 1848. The *Ohio* sailed in September 1849 and the *Georgia* in January 1850.

The *Illinois*, which followed in August 1851, was a distinct improvement on her predecessors; she was 267 feet, 9 inches by 40 feet, 3 inches by 31 feet, built by Smith and Dimon and engined by the Allaire Works with a pair of oscillating engines of 85-inch bore and 9-foot stroke. Having made thirteen and one-half knots, her speed proved most satisfactory, and the smaller beam, moreover, made her a much more comfortable seaboat. Although originally ordered for the Pacific Mail Line, her contract was transferred to the United States Mail and her construction was carried on under the personal supervision of George Law.

The *George Law* was similar to the *Illinois* in many respects, differing chiefly in the use of one funnel instead of two. A pair of inclined engines of 65-inch bore and 10-foot stroke were installed.

The accompanying plans (between pp. 312 and 313) represent a reconstruction of the ship based on three contemporary pieces of evidence. The lines are taken from the mold loft offsets rather than the published plans. The latter do not represent an original drawing of the ship but, together with most of the lines in Webb's *Plans of Wooden Vessels*, were drawn up in the 1880's from offsets especially for publication. Webb hired Charles P. Kunhardt to undertake this drafting work. The author's lines differ from Kunhardt's, in that they show an expanse of flat bottom, but both models and contemporary plans show that perfectly flat floors were typical of the majority of Webb's merchant steamships. The arrangement of the main deck and cabins is taken from a pair of unlabelled, undated drawings in the Webb plan collection which bears the name of David Cuillouette: Webb contented himself with developing his ships' lines by means of a

half model, and, thereafter, employed draftsmen to make any drawings required. Detail deck arrangement drawings are a very great rarity for any ships of this period save naval vessels. No arrangement plan of the house top (or hurricane deck) is available, neither is there a profile of the ship or a sail plan. As a source for reconstructing these items, a rigged model of the ship (Plate 49) in the United States Naval Academy Museum is followed. While there is neither acquisition date nor builder's name, it appears to be a contemporary model. Granted the model's proportions are none too good, it agrees, in general, with the Cuillouette deck plans, the chief differences being the addition of a capstan forward, a steering wheel aft, and the use of skylights instead of gratings over the deck hatches. The author has made one deviation from the mold loft offsets, that being the height of fancy rail forward, which is shown, as on the model, decreasing in height above the plank-sheer as it goes aft while the offsets show an increase in height.

A subject always open to discussion is that of dimensions of any ship. Webb's Certificate Book gives 272 feet by 40 feet by 32 feet, his published plan 272 feet by 39 feet, 2 inches by 29 feet, 6 inches, both listing the tonnage as 3000 carpenter's measure; data at the National Archives[1] give, on the other hand, 278 feet, 3 inches by 40 feet by 32 feet and a registered tonnage of 2141-5/95. Even when dealing with modern ships, similar discrepancies exist, and any published dimension must be considered generally descriptive rather than a final value unless a definite statement is appended giving the exact reference points bounding the measurement quoted. The offsets of the ship indicate a length of about 275 feet, 2 inches from the inside of planking at underside of main deck on the stem to the center line of the rudder stock, also at main deck height, a beam inside planking of 39 feet, 4 inches, and a depth amidships of 30 feet, 11 inches from inside of planking to underside of plank-sheer, the latter point being assumed as the molded height, or underside, of the deck. Actual heights are never given in the Webb offsets.

Another very discouraging factor for anyone trying to reconstruct a vessel no longer extant is the fact that, even if the shipbuilder is thoughtful enough to record his offsets, he may have made changes in the ship on the building ways such as increasing the number of frames amidships, or changing the heights of wales, rails, decks, plank-sheer, etc., without leaving any indication of the fact for posterity; the author has assumed the offsets to be correct except for the alteration previously noted.

[1] Division of Commerce Department Archives, Ship Registers.

The *George Law's* spar deck was a spacious expanse of planking broken by a series of large hatches which, in fine weather, gave light and ventilation to the accommodations below. Bounding it was an open rail to which was lashed a rope netting. Against its stanchions were erected wooden benches. Aft of the foremast was the wheel-house with a large double whel, abaft that, two small hatches giving access to an insulated compartment on the third deck for perishable provisions and ice. Then came a companionway leading to the steerage forward. The galley was located just forward of the stack. The central deck-house formed part of the machinery space with a pair of curving stairways leading to the cabin aft and the captain's stateroom in way of the mainmast. The other officers, together with the doctor, purser and baggagemaster, were housed next to the paddle boxes and the water closets were, as always, on the guards. Ashes were dumped overboard through a scuttle in the inboard side of the paddle box.

On the second deck, the crew berthed in the bow, with a center-line bulkhead separating the black gang from the deck force. At the after end of the forecastle were the windlass and bitts for the anchor chain. While this arrangement for anchor handling gave the passengers an unobstructed upper deck for their pleasure, it did nothing for the cleanliness, dryness, and comfort of the crew. Steerage passengers were carried forward on both the second and third decks in three-high tiers of berths against the side of the ship with the center portion of the second deck kept clear for messing space. Underneath the galley and connected to it by a 'dum vayter,' to use Mr. Cuillouette's spelling, was pantry space serving both the steerage forward and the dining saloon aft. Doubtless, the paddle-wheel shafting must have interfered with fore and aft access. The cabin passengers were carried aft in staterooms on the second and third decks. All the large hatches shown on the main deck were repeated on decks below for the triple purpose of admitting light, air, and cargo. In the holds, an orlop deck was fitted to aid in the stowage of the latter item.

The accommodation plans show space for 110 cabin passengers, if we take their berths as two high; 384 steerage, based on double bunks three high, 16 officers, and a crew of 36, but a mere detail of the number of berths available did not limit the number of people carried to and from the fabulous gold-filled fields of California. On her arrival in New York on 24 May 1855 she carried 817 passengers! A published crew list,[2] in 1857, shows 101 officers and crew, if we exempt three who were working for their passage from New York to Aspinwall.

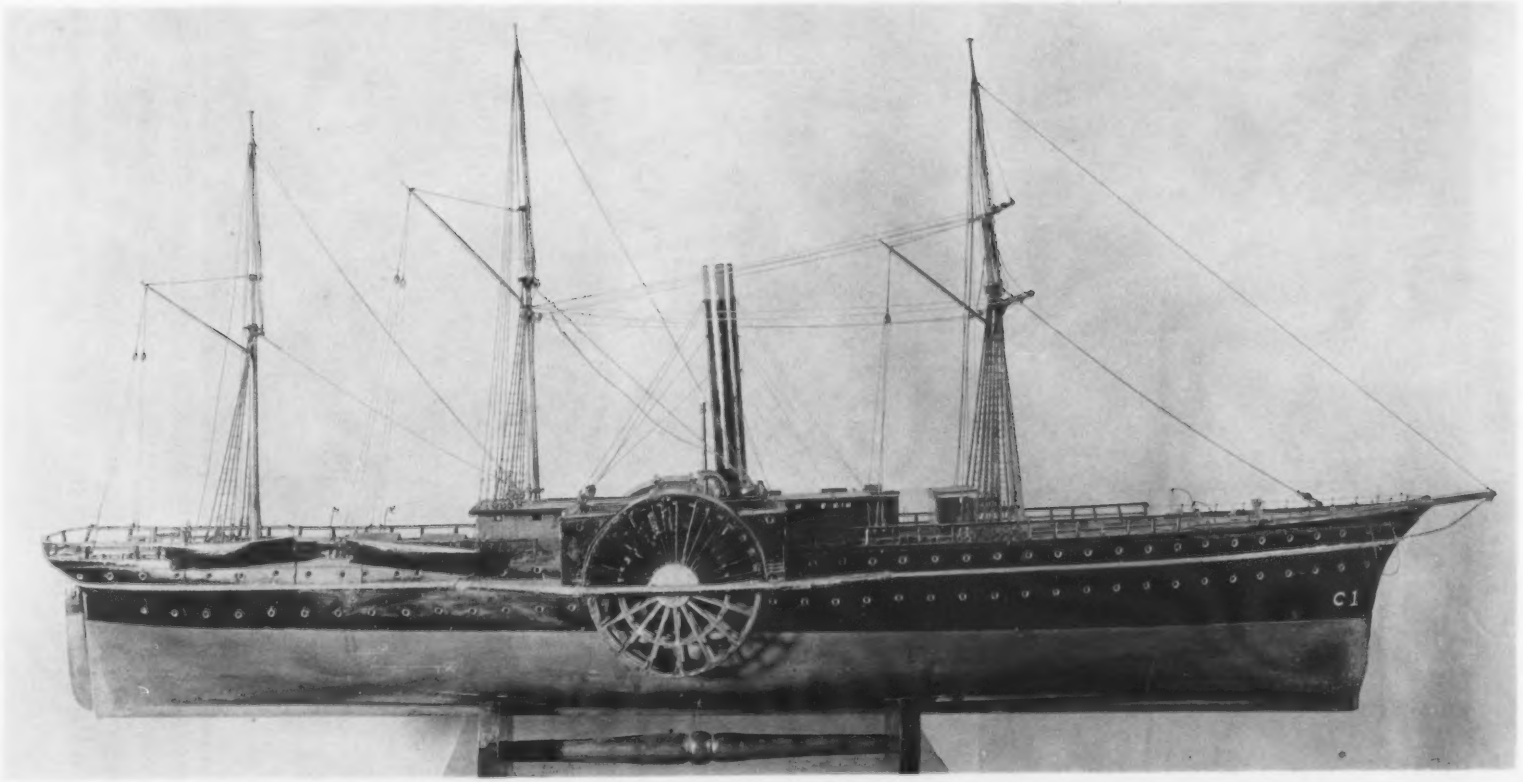
[2] *New York Times*, 18 September 1857.

Captain
3 Deck Officers
Purser
Surgeon
Boatswain
14 Seamen
2 Boys
Chief Engineer
3 Asst. Engineers
3 Fourth Asst. Engineers
12 Firemen
9 Coal Passers
4 Ashmen
2 Storekeepers
Steward
Headwaiter
Butcher
Baker
Pastry Cook
3 Saloon Cooks
3 Ship's Cooks
Stewardess
12 Waiters
Silverman
Tinman
3 Pantrymen
Steerage Steward
6 Steerage Waiters
Captain's Man
Officer's Messboy
Firemen's Messboy
Barber
2 Porters
Water Closet Boy
Scullion

Using the Naval Academy model (Plate 49) as a guide, the hull was black above the water-line with the lower wale painted red and the forward fancy rail varnished. Below the water-line it was, of course, coppered. All deck-houses were varnished with the exception of a narrow white band in the molding around the deck-house top. Paddle-wheels were red, and the funnel black with a red band at its top. Masts and bowsprit were natural wood, with spars and cross-trees painted black. The main deck would be unpainted and the housetop would be covered with canvas and painted gray, if we go by the usual practice of the time. Paddle boxes were black except for the gold semicircle at their center. The four boats (in 1857 she is said to have had six, two metallic boats of the Francis type and four of wood with air tanks at the ends and along the sides) were also black, as were the ventilator cowls, iron truss rods supporting the guards, gratings over the engine room, and top of wheel-house.

On 20 October 1853, the *George Law* sailed on her maiden voyage to Aspinwall under the command of John N. McGowan. She stopped at Kingston, Jamaica, for twenty hours to take on additional coal and arrived at the Isthmus on the morning of the thirty-first. Returning, she sailed on 1 November and arrived in New York on the tenth with 465 passengers and $872,831 in California gold. The passage was a stormy one with heavy seas and gales all the way north of Cuba.

Thereafter, the *George Law* and the *Illinois* maintained a bi-monthly service, sailing on the fifth and twentieth of each month from New York to Aspinwall. The two newer boats were, evidently, more satisfactory than the *Georgia* and the *Ohio*, for the latter pair were laid up in 1854. The United States Mail's subsidiary New Orleans, Havana and Aspinwall service was maintained by a group of smaller vessels including, at various times, the *Falcon, Crescent City, Empire City, El Dorado,* and *Cherokee*. Occasionally,



Steamship *Central America*, ex-*George Law*

Rigged model in the Naval Academy Museum, Annapolis, Maryland

Reproduced by permission of Naval Academy Museum

Wreck of Steamship *Central America*, ex-*George Law*

Reproduced from a print in the Eldredge Collection, The Mariners' Museum

these ships were used on the New York-Aspinwall run when one of the regular pair was being overhauled. At other times, a chartered ship would be substituted.

The *George Law's* sailing date remained on or about the twentieth of each month until July 1854, when she was replaced by the *Empire City*. During that time, however, Captain McGowan's place had been taken by Lieutenant Gustavus V. Fox, U.S.N., later the energetic Assistant Secretary of the Navy during the Civil War, who took command starting with her April sailing. The *George Law* returned to service on 5 August 1854 and sailed regularly on the fifth until February 1856 when the *Illinois* annexed that date and the *George Law* was held over to the twentieth which remained her sailing date up until her loss.

The arrival of any ship bearing passengers, gold, and news from California was always heralded in the contemporary newspapers, but little was said of their individual voyages. The *George Law* was engaged in a regular service, the one for which she was designed and built; her monthly arrivals in New York were taken for granted and mentioned chiefly because she brought news from California.

The amount of gold carried was invariably reported; during the first half of 1854, the *George Law* carried between $800,000 and $1,000,000 every time she entered New York Harbor. Thereafter, a cargo of less than $1,000,000 was exceptional. The maximum amount listed was $1,951,721 in June 1856, but on two other occasions, in November 1855 and June 1857, her treasure list passed the $1,900,000 mark. The *New York Times* lists the number of passengers on board for twenty-six out of the first twenty-eight arrivals, but these show rather wider fluctuations, varying from 206 in January 1855, to 817 in May of the same year. Out of the twenty-six trips mentioned, six showed between 200 and 300 passengers, seven between 300 and 400, six between 400 and 500, five between 500 and 600, one case of 737, and finally, the 817 already noted.

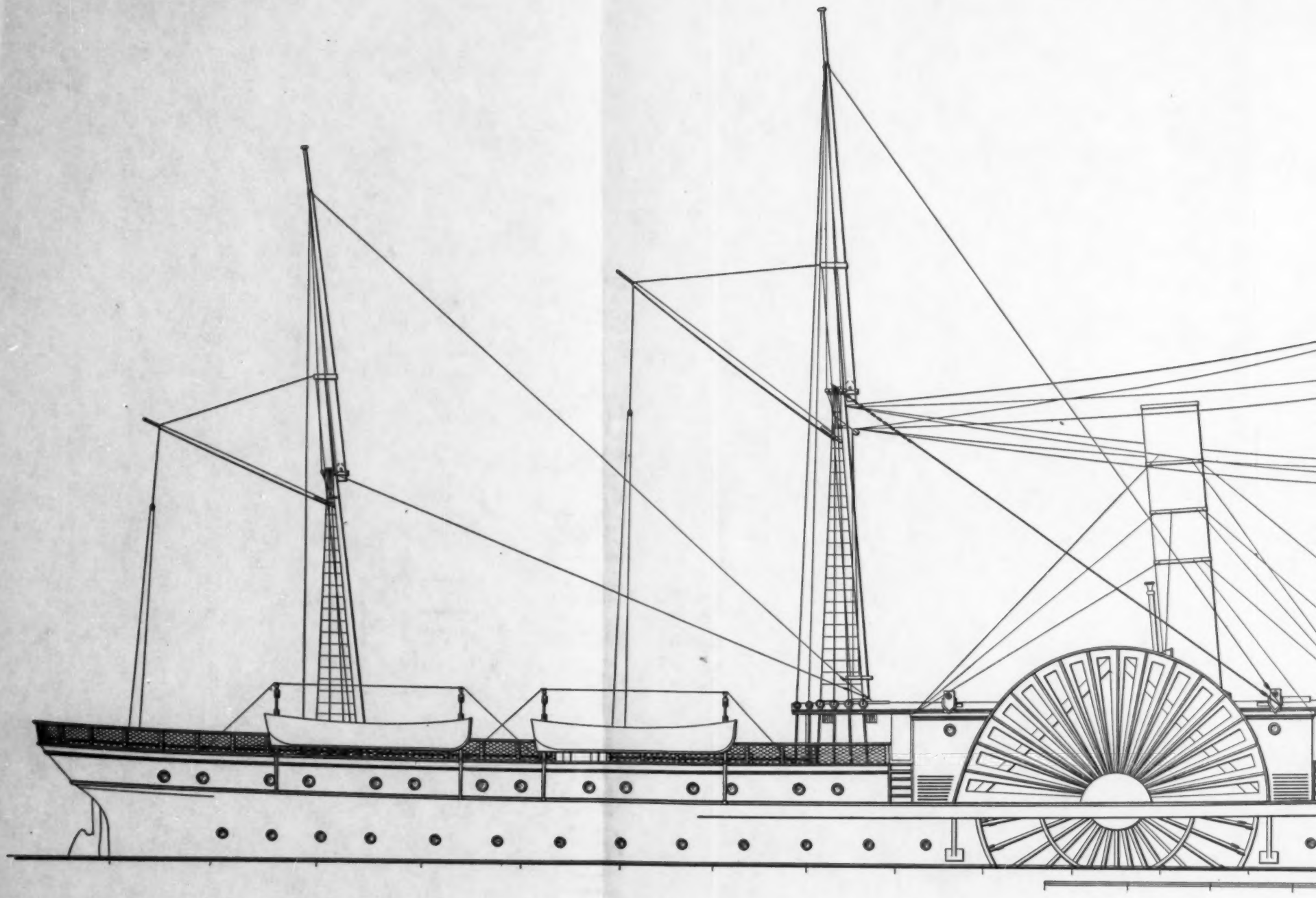
In some cases the *George Law* made the trip from Aspinwall to New York without stopping, at other times she touched at Havana or Kingston, and, in September 1756, she called at Key West after the Spanish autorities at Havana refused permission for her boats to land. Havana was usually used for transshipping New Orleans bound passengers to other United States Mail steamers.

Since newspaper dates and times of departure are neither complete nor particularly trustworthy, it is difficult to estimate the speed of the vessel. Morrison states that the *George Law* made a passage from Aspinwall to New York in seven days, twenty-two hours in 1855, but the author cannot

confirm the fact from the published sailing times. In 1854, however, she sailed from Aspinwall at 11:00 P.M., 30 April, arriving at Quarantine on 8 May at 11:30 (this is assumed but not stated to be at night) giving a passage of eight days, thirty minutes, but her usual time was eight and one-half to nine days. High speed was not a particular necessity in those days; there were, of course, rival lines and steamers, but coal capacities were limited, and an attempt to drive any vessels of that era resulted in phenomenal fuel consumptions; therefore, no captain would risk running out of coal before making port. Early in 1854, the *George Law* had a slight brush with Morgan's *Star of the West,* having overtaken and passed her off Cape Hatteras, but she was about two hours behind by the time New York was reached. The *George Law* could probably make thirteen knots, if pressed, but eleven knots was a more likely sea speed. In fact, one of her engineers, after her loss, stated that fifteen pounds steam pressure could be carried in the boilers with safety, but ten pounds was the usual value.

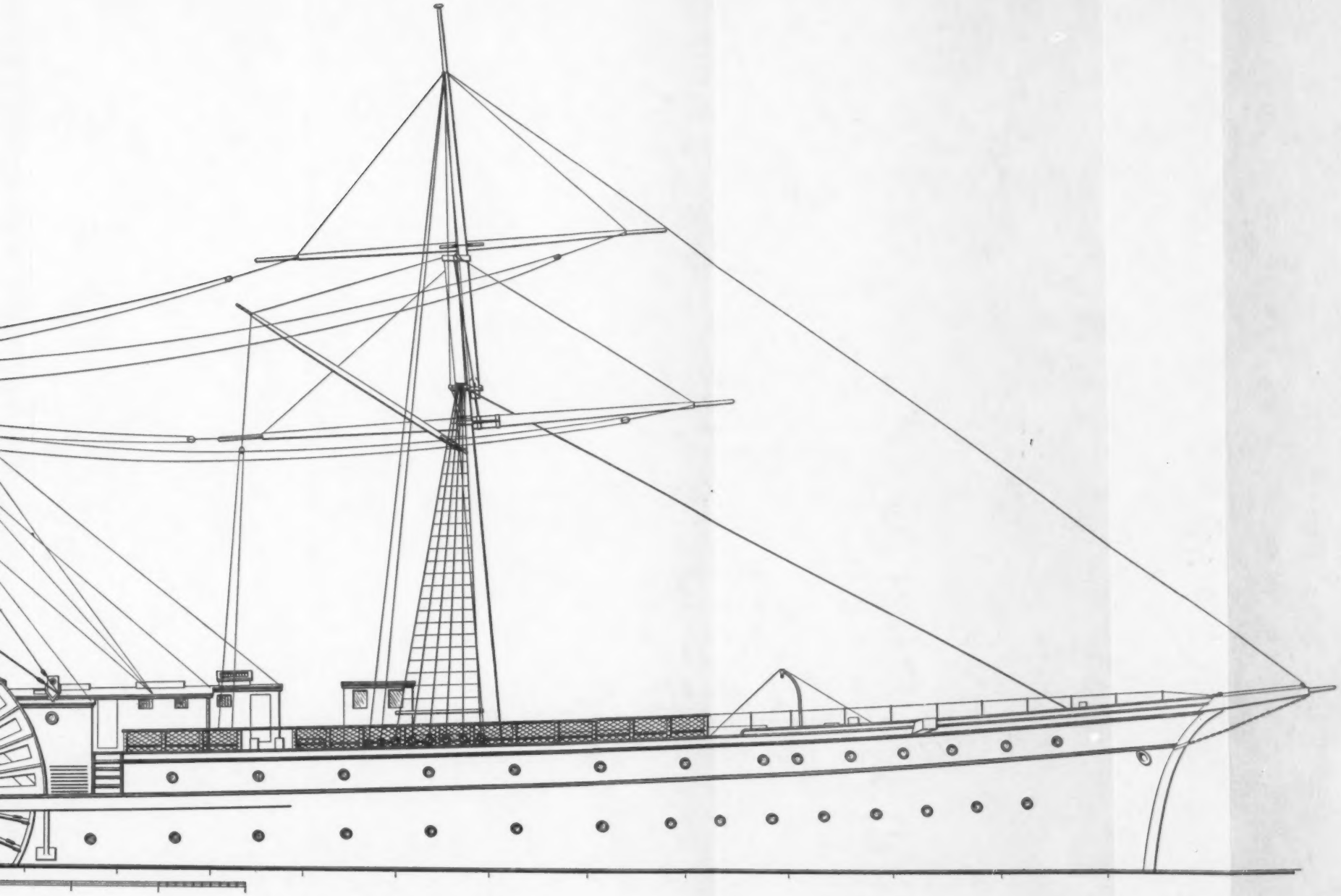
The details of the first forty-three voyages as previously stated are not well chronicled because of their lack of eventfulness. The ninth is noteworthy in that Captain H. A. Adams, U.S.N., was a passenger in the *George Law* when she sailed from Aspinwall at 7:15 P.M., 1 July 1854. Captain Adams carried dispatches from Commodore Perry's expedition to Japan, including the American treaty with that country which had finally been signed on 31 March at Yokohama. The 6 February 1855 sailing of the *George Law,* her sixteenth voyage from New York, saw a group of guests invited for the occasion of the opening of the Panama railroad. Although the first train had crossed from North to South on 28 January, the 16 February crossing, complete with flags, flowers, banquets, and speeches, marked the first time the *George Law's* passengers were transshipped entirely by rail.

The end of the twenty-fifth voyage was marked by grounding in New York harbor while under the command of a pilot. No damage was done and the ship was floated off the next day, 30 November 1855, after her passengers and mail had been transferred to the *Leviathan* and other harbor craft. After her loss, the New York papers reported that she had been aground, apparently some time in 1857, at the southern end of her route. This is substantiated by the fact that she was put in the balance drydock at the Webb Shipyard after completing her forty-second voyage and at this time some of her copper sheathing was replaced and her engines and boilers were overhauled. In her place, the *Star of the West* sailed 20 June 1857 for Aspinwall. It was during this overhaul that the ship's name was changed from *George Law* to *Central America.* Why the name was changed



—George Law 18

Cedric Ridgely-Nevitt Jun



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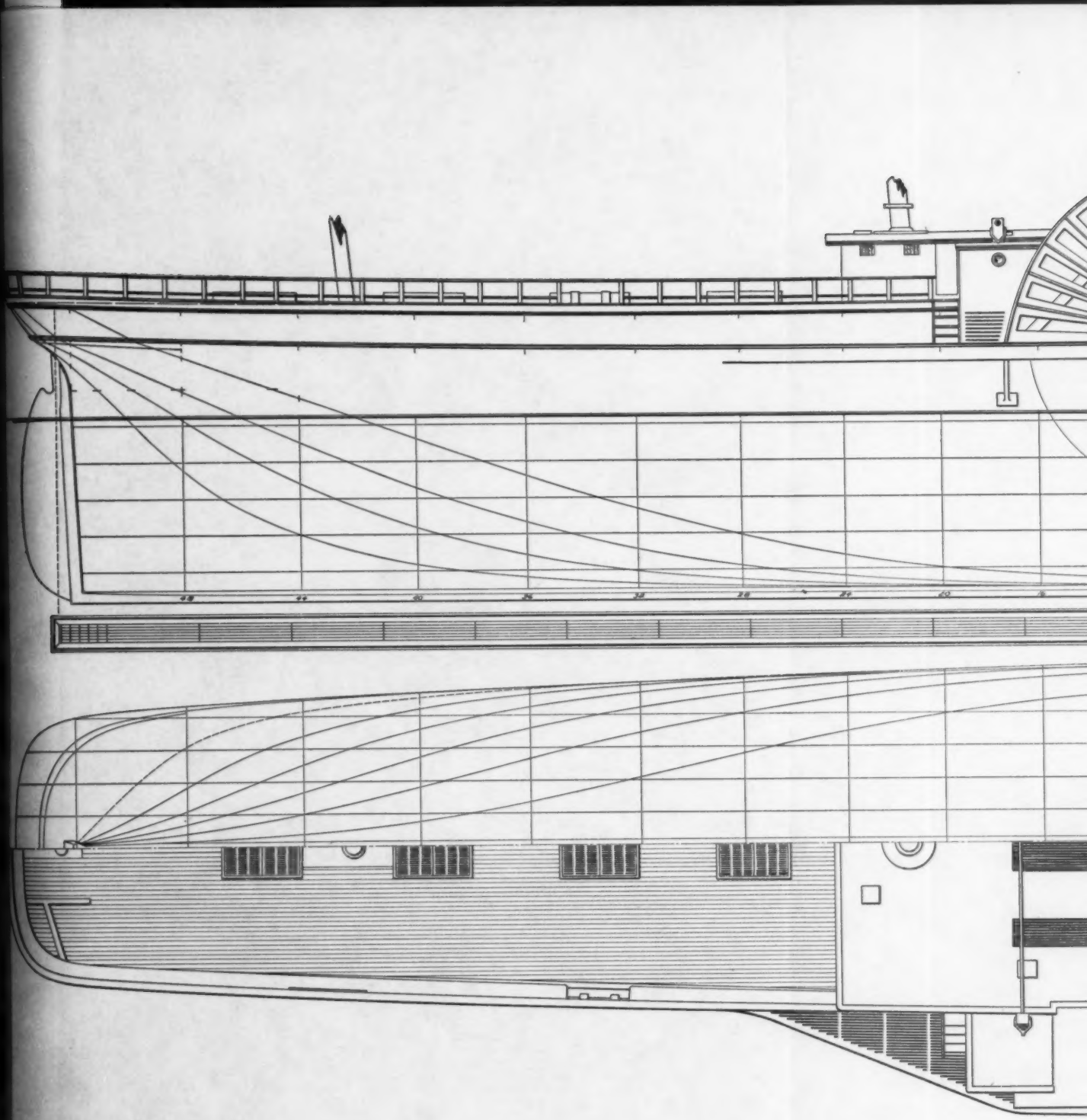
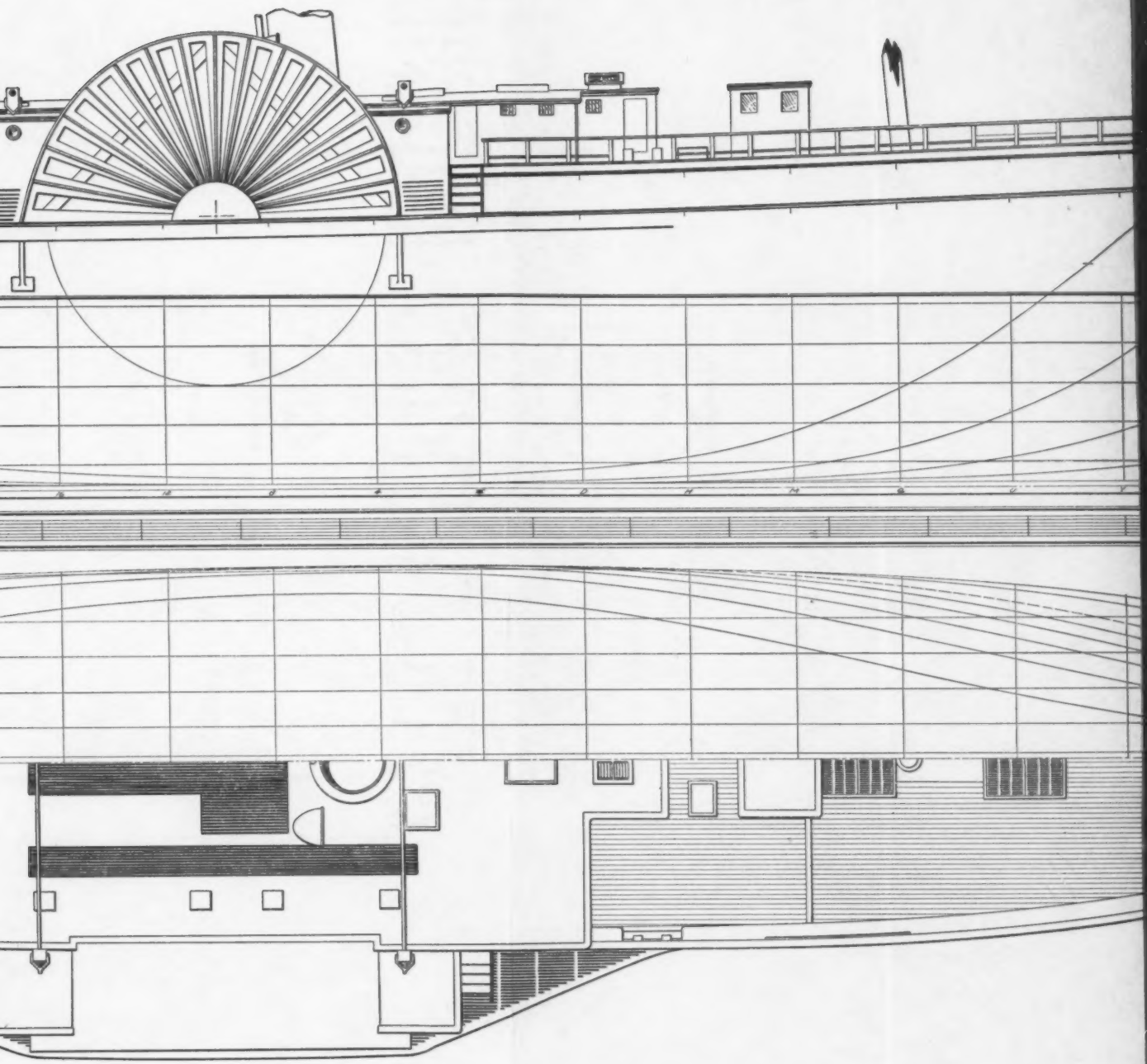
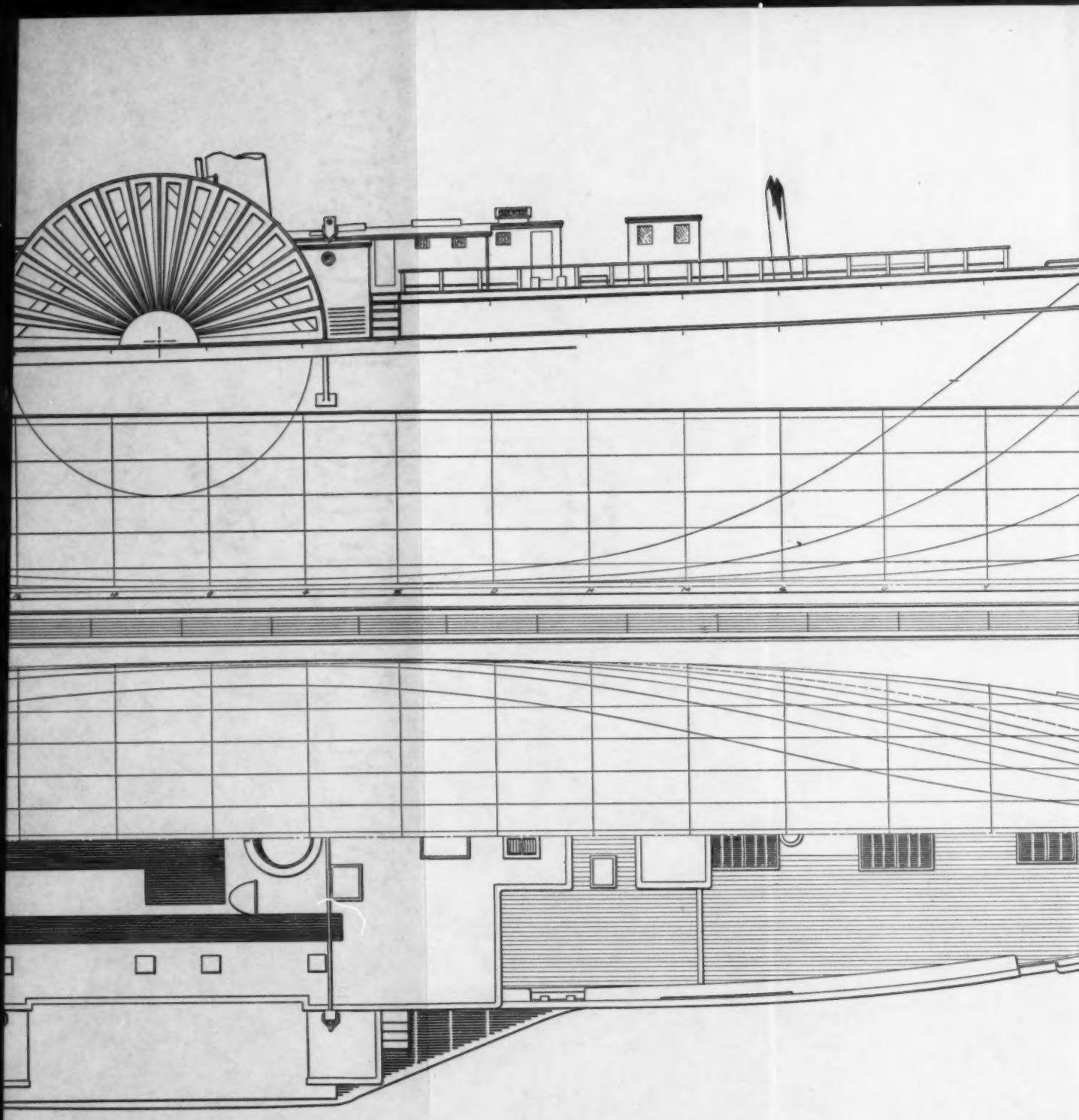
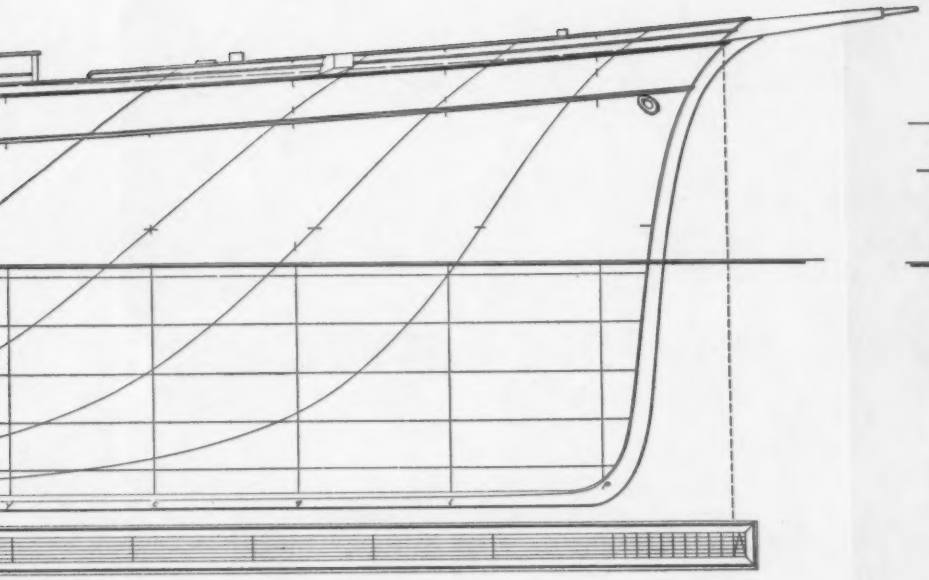
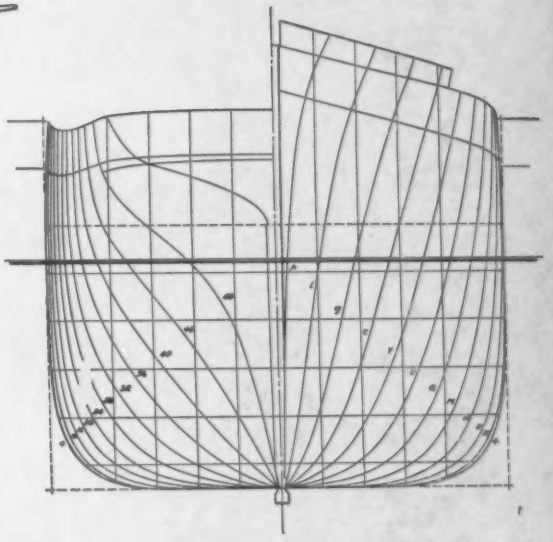
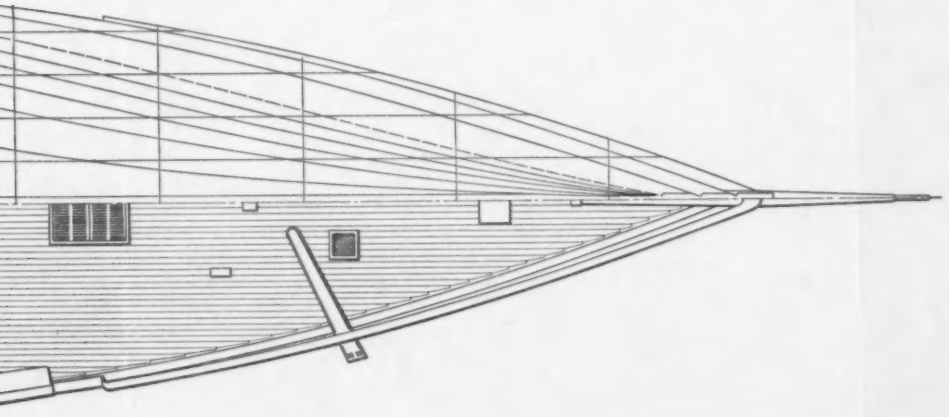












—George Law—
1853

Lines from offsets. Deck after a plan in the Webb Collection. Profile and top of house reconstructed from U.S. Naval Academy model.

Length Between Perpendiculars	275'-2"
Moulded Breadth	33'-4"
Moulded Depth at Side	30'-11"

Cedric Ridgely-Nevitt July 1940

at so late a date is not known, for George Law had sold out his interests in the United States Mail Steamship Company in 1853, some nine months before the ship named in his honor was to make her maiden voyage.

The year before, the *George Law* had similarly been replaced for one trip, this time by the *Ariel* which sailed 21 July 1856. Quite possibly this was for routine repair and overhauling purposes that could not be accomplished in the week usually elapsing between arrival at and departure from New York. In general, the *George Law* had a remarkably regular record of sailings; to recapitulate the deviations from routine, there were three weeks spent at New York in July 1854, between her ninth and tenth voyages, three in February 1856 between the twenty-fourth and twenty-fifth, five in July 1856 between the thirty-second and thirty-third, and five in 1857 between the forty-second and forty-third.

During her brief career the ship had six different commanding officers; John N. McGowan for the first six voyages; Lieutenant Gustavus V. Fox, U. S. N., for the seventh through the fourteenth; Lieutenant McKinstry, U. S. N., fifteenth and sixteenth; Fox again, seventeenth through nineteenth; A. G. Gray, twentieth through the twenty-fourth; Lieutenant William L. Herndon, U.S.N., twenty-fifth through the thirty-eighth; Lieutenant T. T. Hunter, U.S.N., for a single trip, and Herndon from the fortieth until he was lost with his ship on her forty-fourth voyage. Herndon was well known at that time, both for his work with his brother-in-law, Matthew F. Maury at the Washington Naval Observatory, and for his exploration of the Amazon in 1851-1852.

In contrast to the changing list of commanding officers, George Ashby held the position of chief engineer throughout the ship's career.

The following account of the loss of the *Central America*, on the second trip under her new name, is based on the published statements[3] of George Ashby, chief engineer, James M. Frazer, second officer, and John Tice, second assistant engineer, since all three are in close agreement. Frazer's account is largely occupied with the happenings on deck, while Ashby's gives a more complete survey of the engineering details, the latter being further corroborated and amplified by Tice.

The *Central America* sailed from Havana on 8 September 1857, heading for Cape Florida, to the accompaniment of fine weather, a moderate breeze, and a head sea. Her machinery was in perfect order after its recent overhaul. In the first twenty-six and one-half hours she covered 286 miles, in the succeeding twenty-four hours, 215 miles. The breeze gradually increased in strength throughout the ninth and tenth. At 8:00 A.M., of the

[3] *New York Times*, 22 September 1857, 8 October 1857.

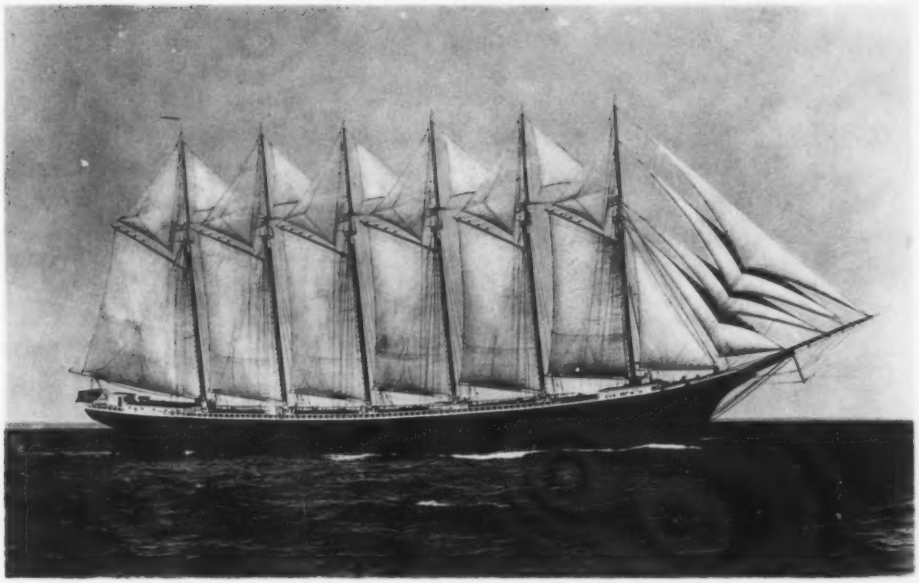
eleventh, the ship was at 31°45′ N, 78°15′ W, about 95 miles east of Cape Roman and 127 miles south, ½ west of Cape Fear off the Carolina Coast. It was blowing fresh with wind and sea from north northeast and occasional gusts of rain. At 9:00 A.M., the engine-room force found that the ship was making considerable water and listing more and more to starboard so that the use of barrows for passing coal became increasingly difficult.

Most of the ship's waiters were sent below to aid in passing coal by means of baskets and buckets, the starboard Worthington pump was started, and the bilge injection opened so that condensing water was drawn from inside the ship instead of outside. An inspection showed that all dead-lights were tight but the location of the leak could not be determined since it was already covered by the rapidly rising water. The gale outside was rapidly increasing in intensity and the ship could not be kept headed into the wind and sea. A storm spencer was set, but blew out immediately; then bolts of canvas were spread in the mizzen rigging, but to no avail.

Rising water was overflowing the coal bunkers making it impossible for the men to work therein. Because the main boiler pressure was falling rapidly, the donkey boiler's fires were lit and the main engines stopped at about 1:00 P.M. By firing the port furnaces of one boiler, however, steam pressure was again built up, even though all starboard fires were extinguished by two o'clock. Meanwhile, gangs of bailers were set to work at the after cabin and lower steerage hatches.

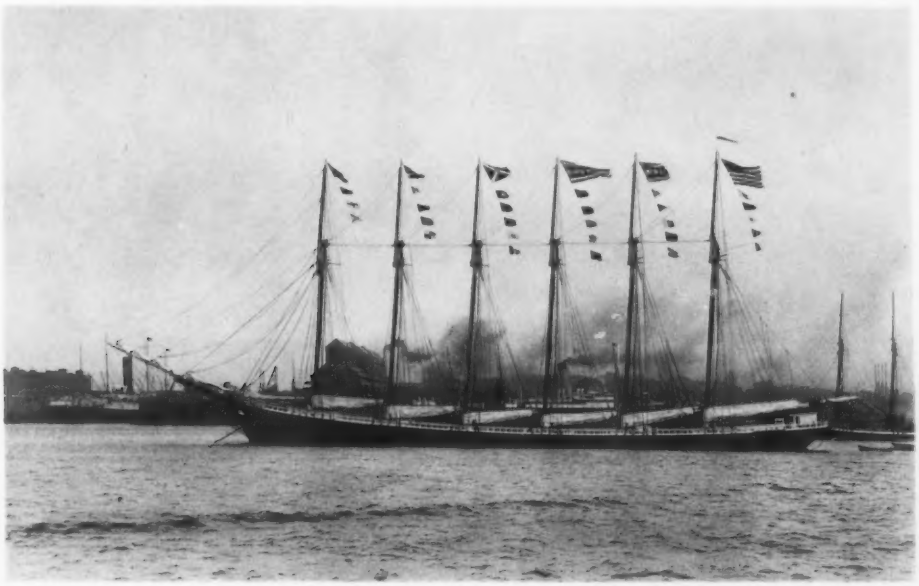
The fore-yard having been lowered, the fore-sail clues were lashed to the deck and the sail set by hoisting the yard, but it was immediately reduced to tattered shreds of canvas. By 5:00 P.M., all main boiler fires were finally extinguished, but the Worthington Pump was shifted to the donkey boiler and steam was maintained by burning wood in its grates. The list to starboard was increasing, making it more and more difficult to maintain a footing on deck.

Late in the afternoon, the foremast was cut away, but part of the rigging fouled one anchor and the cat-head, causing the mast to shoot underneath the ship as it fell and probably causing additional damage to the ship's bottom. A final attempt was made to head the ship into the wind by rigging a drag of the fore-yard, a kedge anchor, and a hawser made fast around the stump of the foremast. Concurrently with these efforts on deck, the engineering force was having increasing difficulty with the feed pipe to the donkey boiler which became so clogged, that it had to be cut away and replaced.



Six-masted schooner *George W. Wells*

Reproduced from a photograph by N. L. Stebbins in the C. R. Sawyer collection, Peabody Museum of Salem



Six-masted schooner *Mertie B. Crowley*

Reproduced from a photograph by N. L. Stebbins in the Peabody Museum of Salem

City of Sydney rigged as six-masted barkentine

Reproduced from a photograph by Nautical Photo Agency

Oregon Fir rigged as a six-masted schooner

About 10:00 P.M., the hawser holding the drag chafed through and the rolling of the ship started a leak around the starboard wheel-shaft. This, however, was plugged with blankets from the inside, and a sail wrapped around the shaft to bring it under control.

Dawn of the twelfth found the *Central America* still battered by the gale and rolling wildly in the trough of the sea. Her exhausted crew and passengers were using barrels rigged on whips to try and stem the rising water, while her steam pumps, although almost submerged, worked gamely on. One of her engineers had cut off part of the main engine escape pipe out of which were improvised a pair of hand pumps set up in the steerage. Dead-lights in the ship's sides were beginning to give way before the waves and had to be stuffed with blankets. Finally, around 9:00 A.M., the steam pumps became completely submerged and stopped.

Just after midday, the *Central America's* weary bailers were cheered by the sight of a sail, the brig *Marine* of Boston, bound from Cardenas to New York. She, too, had suffered from the gale, having lost her jib-boom and main-yard. Captain Herndon hailed her, asking her to take off his passengers, and she hove to, but could not, because of the damage to her rigging, maintain a position close to the *Central America*. The latter's remaining five boats, one having been stove in during the night, were gotten over, but a second was wrecked in lowering and a third, although successfully launched, was swept underneath one of the guards and lost.

All the women and children were marshalled on deck and lowered into the three remaining boats with considerable difficulty while the *Marine* was gradually drifting farther and farther away. By the time the third boat, under the command of the chief engineer, got clear, the brig was at least two miles to leeward. The *Marine's* boats were too damaged to be of any use. Only one of the three boats returned after reaching the *Marine*, the crews of the others refusing to make the trip despite both the threats and the bribes offered by Mr. Ashby. The effort was, however, in vain for the boat was in such a damaged condition that Captain Herndon ordered it off again; had it come alongside, it would have been swamped by the rush of terrified passengers seeking safety.

At 6:30, the schooner *El Dorado* of New York appeared and spoke to the *Central America*, but her captain seems to have made little attempt to maintain contact with the stricken steamer, which began taking water over deck about 8:00 P.M. Bailing had continued up until that time and the forward part of the hurricane deck was cut away to form a raft.

During the night, the Norwegian bark *Ellen*, passing near the spot where the *Central America* had disappeared, picked up a total of 49 per-

sons floating on wreckage in that vicinity. The *Marine* had previously taken on board 97 made up of the women and children and the crews of the three boats from the *Central America*. Not until nine days later, however, were the final survivors, a group of three, found drifting in one of the *Central America's* boats by the brig *Mary*, bound from Cardenas to Cork. John Tice, the first assistant, had drifted on a piece of wreckage for three days before encountering the boat, apparently one that had broken away from the *Marine*; the other two, he picked up two days later from a portion of the hurricane deck. Thus only 149 persons were saved, one of whom, the steward, died of injuries aboard the *Marine*, and 423 were lost, together with a shipment of $1,219,189 in bullion. The ship, at that time, was valued at about $140,000, and was uninsured.

From the evidence presented by survivors, it appears that every possible effort was made by both deck and engineering officers to save the ship, but their labors were thwarted by the fury of the gale and the magnitude of the leak that appeared so suddenly and could not be located. Whether or not the foremast, when cut away in an endeavor to head the ship into the wind, caused further damage, no one knows, but it seems a possibility.

There were many post-facto accusations published in the contemporary press; the ship was said to be in poor condition and had had her name changed to delude the travelling public into believing it was a new vessel; the chief engineer was accused of fleeing the ship and refusing to return with the two undamaged boats which had already made a perilous two-mile trip to the *Marine*. The first of these is hardly likely in that the *Central America* was only four years old and, moreover, her builder had made an international reputation for himself as to the quality of his design and workmanship. The second, while advanced by some of the rescued passengers—whose stories were neither explicit nor consistent—was denied by the captain of the *Marine*; two of the boat crew's refused to make the return trip, and the third, which did, was so damaged that the gesture was futile.

The foundering of the *Central America* can best be laid to the inherent structural weakness of a wooden ship so twisted and torn by wind and sea that some part of the water-tight shell gave way.

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Loss of the Malleville

BY JOANNA C. COLCORD

THE clippings reproduced below are from an unidentified Maine newspaper of the spring of 1883. They tell the grim story of the wreck of the bark *Malleville,*[1] commanded by Captain Edward F. Harlow of Brewer, Maine, on Vancouver Island, 10 October 1882, with the loss of all on board, including the captain's wife, Abigail Harlow, their two small children, and the wife of one of the mates.

Bajo Point, near which the *Malleville* struck, is on Nootka Island a few miles north of the entrance to Nootka Sound, and two-thirds of the way up the west coast of Vancouver Island from the port of Victoria, lying at its southern tip. The *Malleville* was bound for Puget Sound in ballast, 'seeking,' having sailed from Shanghai about 8 September. She was therefore far to the northward of her course when, on the afternoon of Sunday, 8 October, she was sighted off Herquoit 'beating against a very strong wind' which Father Brabant calls easterly. But this would have been a fair wind. It must rather have been southerly; and Captain Harlow, on making the land in such weather, must have immediately stood off to sea on the port tack and been lost to view from the shore.

The rest can be only conjecture. Father Brabant writes that 'a continuation of gales' had visited the coast; it had probably been impossible for days to get an observation, and Captain Harlow, proceeding by 'dead reckoning,' was uncertain of his exact position. Sunday's glimpse of the wild, barren coast at Herquoit, while giving him his longitude, would have done little to fix his latitude. However, he must have known that he had to make southing. Sometime on Monday, the wind heading him a little, he must have believed it safe to head inshore again on the other tack. But the wind continued to haul into the west, and blew with such fury that he found himself unable to 'claw off' in its teeth from the shore that now lay to leeward.

[1] The bark *Malleville* was built in Freeport, Maine, in 1866, and owned by E. & C. Bliss of that town. She was 925 tons (166.5 x 32.9 x 22.9). Her last survey was held at Liverpool in August 1878, at which time extensive repairs were made. Captain Harlow commanded her from 1877 until her loss.

Late on Tuesday afternoon, the Indians on Bajo Point saw the vessel with 'all sails set running right before the wind and seemingly unmanageable.' They concluded that she had lost her rudder; but had this been the case, she would have broached to. It seems more probable that Captain Harlow, seeing that he could not weather the point, decided on the last desperate expedient of driving the vessel ashore bow foremost, while there was still a trace of daylight, hoping to pile her far enough up on the beach to give the people aboard a chance for their lives. But before reaching shoal water she took the ground on Sunday Rock and in the course of the night went to pieces.

Though Father Brabant's English was excellent, he thought in French, as certain turns of expression show. The French 'sauvage,' for example, carries more the meaning of 'rude and uncivilized' than of 'cruel and ferocious' as implied by our English 'savage.' True, the men who opened up the Northwest fur trade found the Nootka Indians a bloodthirsty and piratical tribe; but under the gentle teachings of Father Brabant and his associates, their descendants had become, as he modestly puts it, 'friendly.' It is gratifying to be able to report that a liberal reward was sent to these good people in return for the valuables recovered.

Mrs. Harlow's beauty is still remembered along the Penobscot—she was one of the region's belles of two generations ago. And Captain Harlow, in the words of one of her relatives, 'idolized her and could not do enough for her'—as the discerning priest surmised. She was still in her twenties, the children about four and six, when the tragedy took place.

[*First clipping*]

A TOUCHING EPISTLE

Humane Treatment by a Catholic Priest of the Remains of Passengers and Crew of a Freeport Bark

Last fall a brief telegraphic message from San Francisco announced the sad tidings of the wreck of the bark *Malliville,* from Hong Kong to Vancouver's Island, with the probable loss of all on board. The *Malliville* was built in Freeport in 1866, and was commanded by Capt. Harlow, of Brewer, whose wife and two children—his entire family—were on board. A relative of Mrs. Harlow residing in Portland, in response to an inquiry addressed some time since to Father J. A. Brabant, a Catholic clergyman of Herquoit, (150 miles from Victoria), yesterday received a touching epistle giving further details of the wreck, and information which fur-

nishes gratifying evidence of the widespread dissemination of the principles of Christian benevolence, and of the ties of human brotherhood. Following is the epistle:

Herquoit, Jan. 30, 1883

My dear Madam;—

I have just now received your letter dated Nov. 6, 1882, and am very sorry indeed not to have been able to give you an answer at once, but such is my situation that for over four months I have neither seen nor heard a word of news of any of my white fellow-men. Judge therefore of my feelings when, early last October, two savages of my mission brought me the sad news of the wreck of the bark *Malliville* about ten miles beyond my residence, opposite their village. Without losing a minute, I accompanied them to the spot, and first of all, I was horror-struck to find on the beach the corpse of a young sailor. Nothing was standing of the ship, and the beach was covered with wreckage. After digging a grave with the help of my Indians, I buried the poor sailor and sent off my Indians to look if there were more bodies washed on shore.

Next they went in their canoes, and almost at once they discovered between the rocks the body of a young lady; she wore two golden bracelets marked 'Abbie,' she had four rings on her hands, she had ear-rings, one small gold button and one larger one, and a gold chain around her neck. The letters on the jewels are those given in your letter. All these, and a seal-skin saque and a fine shawl, are in the hands of the Indians, but there is no trouble about getting them. However, I hope it will not become my duty to mention it under the sad circumstances; I promised them that they would be liberally rewarded by the relatives in case they should be required to give them up. For, indeed, those poor creatures deserve credit for their good-will and kindness under the circumstances.

As soon as poor Mrs. Harlow was brought on shore I myself took possession of the corpse. An Indian woman said she had on her seven dresses and underdresses; she looked as beautiful and as natural as if alive, poor creature. I thought, tears will be shed when the news will be received by your relatives, but few will feel the situation more intensely than I myself, to whom you are a stranger.

Need I tell you, my dear madam, that even savages did cry in presence of the corpse of one who had been so beloved by everyone, as her many articles of jewelry and dress well indicated. Everyone, therefore, was anxious to do their best for the dead one. The body was wrapped first in white linen, and the chief of the tribe, wishing to show respect above and more than his subjects, gave us a pair of his finest new white blankets;

and the body, after completing further and necessary preparations, was laid to rest about four miles beyond the eastern point, west coast of Vancouver's Island. A temporary fence was put around the grave, and any further instructions you may please to give will be faithfully carried out.

I recovered eleven more bodies, but the children came only on shore about six weeks later. Their remains, and those of the other parties on board, are buried in close proximity to the resting place of your dear relative, Mrs. Harlow. I stayed at the spot of the wreck till my provisions gave out. It has taken more than two weeks before I got over the shock which the sad occurrence had made on my mind.

Now in conclusion, you will please accept my most sincere feelings of sympathy in your sad bereavement. Anything you will ask me to do, if it be in my power, shall be done; for although a stranger to you all, I feel your situation most keenly. Once more offering you my heart-felt feelings of condolence,

I remain your servant,

Rev. A. F. Brabant, Herquoit, V. C. I.

The writer explains in a postscript that he is 150 miles from Victoria, and that only three or four times a year has he any communication with the outside world.

It is evident that the explanation of the extensive wardrobe found on the remains of Mrs. Harlow is found in the fact that they were worn in the hope of saving them, and probably put on when all hope of saving the vessel had passed.

[*Second clipping*]

THE ILL-FATED *MALLIVILLE*

Additional Particulars of the Wreck

Father Brabant, the devoted Catholic missionary on the coast of Vancouver's Island, who some months since gave interesting information relative to the bark *Malliville,* Capt. Harlow of Brewer, and whose communication to a lady relative in Maine was published in full recently, supplies additional particulars under date of Feb. 23d. We make the following extracts:

Herquoit, the headquarters of my mission, is 150 miles from Victoria. Have been living here since '74 and until lately have been the only white resident. Recently a trader with his wife have located here, coming from Sydney, Australia. There are but two or three white families between us

and Victoria. The coast is inhabited by about 4,000 Indians, very savage until a few years ago, but now very friendly. We have missions and chapels all along the coast, and myself and two other priests, living about sixty miles above and below, visit them regularly.

The wreck occurred on 'Sunday Rock,' opposite which is an Indian fishing-station, and about ten miles from the mission. The coast is very rough, and foot travel is very difficult. For this reason, the elderly trader was unable to accompany me in my search for the parties. Not once in a twelvemonth is a vessel seen off Herquoit. But on Sunday, October 8th, a bark was noticed outside, beating against a very strong easterly wind and a heavy sea. Before dark the vessel was out of sight. We had experienced a continuation of gales, and at this time the wind was blowing furiously and the sea was rough beyond expression.

Late in the afternoon the *Malleville* was seen by the Indians living near Bajo Point. She was close in shore, had all her sails set, and was running right before the wind and seemingly quite unmanageable. The night was dark and stormy, the rain falling in torrents. With a broken or lost rudder, to judge from her movements, and a westerly gale blowing, it was evident that the vessel could not avoid the Point upon which she struck.

Wednesday morning the Indians found the beach covered with wreckage. Nothing was left standing, masts, house, and everything had been knocked to pieces against the rocks. The wreck was complete. The lifeboats I found all in a pile two miles away from the rock.

The young sailor I spoke of in my last was found close to the ranch. As he had nothing on but a shirt and a short oil-cloth coat, I am sure he had swam ashore; and I am also confident that all on board would have been saved had the wreck occurred on a clear night or in an ordinary state of weather. The body of the wife of Capt. Harlow was found shortly after I had buried the sailor; say eighteen hours after the vessel struck. For fear some of the jewelry might be lost in taking the corpse out of the water, the Indians had taken off her rings and other valuable jewelry while the body was still in the water. This they promptly notified me of when they turned over the corpse to me, and I allowed them to retain it, cautioning them to safely keep it until called for. This injunction they have scrupulously regarded.

I wrote in my last of the careful burial of the bodies; had Mrs. Harlow been my own sister, her remains could not have received more kindly attention. Seven bodies were brought ashore and buried a few days after the wreck; the others, about a dozen in all, including the children, were brought ashore several weeks later, in a state of decomposition. The body

which we took to be that of Capt. Harlow came ashore the last of November; that of the wife of the second officer has not yet been found. Considerable clothing, ladies' dresses, etc., has been washed ashore.

The Indians have acted nobly. Some of them were for hours up to their waists in salt water, sometimes covered by the surf, dragging the bodies to the shore and aiding me in every conceivable way.

As not a soul is left to tell the tale of this sad wreck, it will always remain a mystery as to how it happened. Why every man on the wrecked vessel had his beard freshly shaven. Why did Mrs. Harlow wear all her rings and other jewelry during a storm at sea, and at night time, too? And why was she dressed, even to the arrangement of her hair, as if preparing to attend a fashionable party? But these are vain and useless speculations.

Allow me to assure you of my deepest sympathy and tender any further services I may be able to bestow.

Your obed't servant,

A. J. Brabant, R. C. Priest.

Notes

Gunnery Practice, 1807

The accuracy with which a muzzle loading smooth bore cannon could fire a ball is a matter frequently discussed by those interested in naval warfare up to the period of the rifled shell gun. Some light is shed on the question by the results of a test made on 31 December 1807.[1]

On that day Captain Isaac Chauncey, commandant of the New York Navy Yard, accompanied by several army artillery and engineer officers boarded United States Gunboat *6* and sailed down the bay to the Narrows. There Number *6* anchored close in by Staten Island and fired at a flag set up against a high bank on the Long Island shore. The flag had an area of one square yard. With eight pounds of powder as the charge, nine shots were fired at the target from a 32-pound long gun, the standard armament of the gunboats. Seven shots were fired at a 1750-yard range. The pattern extended from 10 yards to the right to 5 yards to the left of the target, and from 2 yards below to 3 yards over the flag; in other words, all seven balls struck within an area 45 feet long by 15 feet high. Had these shots been fired at almost any vessel then on the merchant marine register (Jefferson's embargo had just gone into effect and the merchants needed to be impressed with the prowess of the United States Navy to enforce it) each shot would have found its mark either in the hull or rigging.

Two additional shots were fired at a range of 2200 yards with Chauncey himself acting as pointer. The first ball struck at three o'clock, 12 yards. The second passed directly through the flag!

M. V. BREWINGTON

[1] Navy Department Archives, Captain's Letters No. 10, vol. 3, Isaac Chauncey to the Secretary of the Navy.

Captain Benjamin F. Simmons in Australia

In Miss Joanna C. Colcord's article, 'Salving the Ship *Crystal Palace*,' The American Neptune, III (1943), 316, note 2, it is stated that 'not a great deal has been learned about Captain [Benjamin F.] Simmons' history before he took command of the *Crystal Palace*, other than the details given here.' And on the previous page his shipmate Joshua N. Rowe states: 'He remained on the coast of New Holland three years, during the time he was mate and master of several small coasters.'

In newspaper indexes in the Mitchell Library, Sydney, Australia, there is one reference to Captain Simmons. In the *Sydney Morning Herald* of 27 February 1843 there is a letter by him to the editor concerning his treatment by the Sydney Water Police. There was a clause in the Water Police Act which empowered the police to lock up seamen found ashore after 9 P.M. without a pass from the master or officer in charge of their vessel. In a footnote to the letter, the editor of the *Herald* described this clause as one of the most arbitrary in the Statute Book, and added that at any rate it could not be held to apply to officers. Simmons had been arrested and locked up for the night for being on shore without a pass. His letter is a dignified one, written in excellent English. The relevant matter is that he was chief mate of the schooner *Waterlily*, and in the closing paragraph he stated: 'Many mates have been masters of vessels. I myself have been and daily expect the command of another.'

The *Waterlily* is described in an advertisement of the same date as 'the fast sailing first-class schooner *Waterlily* with very superior accommodations for passengers and from her punctuality a great

favourite.' She was a regular trader to Hobart, and a cabin passage, including an excellent table, wines, etc., cost £8.

IDA LEESON

Six-Masted Rigs

The *Great Britain* of 1843 (built at Bristol, England; 3282 tons, dimensions 293 feet 5 inches x 48 feet 7 inches x 31 feet 5 inches) was launched with six masts, carrying yards only on the second, but she was rerigged with four masts in 1847 after being ashore, and later as a full-rigged ship. The *Great Eastern* of 1859 (built at London; 20,152 tons, 678 feet x 77 feet 10 inches x 48 feet 3 inches) also had six masts, with yards on main and mizzen. She was scrapped in 1887 and after her time most steamers had no more than four masts. However, the *President Lincoln*—torpedoed in 1918—and the *President Grant*—now the transport *Republic*—built at Belfast in 1907 for the North German Lloyd (18,100 tons, 599 x 68.2 x 48.3 feet) and taken over by the United States in 1917, had six masts, although by that time sail-carrying was a thing of the past in transatlantic steamers.

There was at this time, nevertheless, a six-masted vessel using sails on the North Atlantic run. The *Navahoe*, built at Belfast in 1908 for the Anglo-American Oil Co. (7718 tons, 450.2 x 58.3 x 31.2 feet) is down in some accounts as the largest sailing vessel ever produced; but she was really only a bald-headed tank barge without bowsprit, carrying gasoline from Bayonne to England under tow of the steam tanker *Iroquois*. The *Navahoe* became a storage hulk in Venezuela in 1930 and was scuttled in 1937.

On the east coast of the United States the increase in size of schooners for the coal trade resulted in the first two wooden six-masted schooners in 1900—the *Eleanor A. Percy* and *George W. Wells*. They were followed by *Addie M. Lawrence* (2807 tons, 292.4 x 48.3 x 22.2 feet: the smallest of this group) in 1902, *Ruth E. Merrill* in 1904, *Alice M. Lawrence* in 1906, *Mertie B. Crowley* in 1907, *Edward J. Lawrence* and *Edward B. Winslow* in 1908, and *Wyoming* (the largest of this series, 3730 tons, 329.5 x 50.1 x 30.4 feet; probably the largest wooden sailing vessel of all time) in 1909. All were built by Percy & Small at Bath, Maine, except the *Wells*, built by R. L. Bean at Camden, Maine, and the *Crowley*, begun at Camden by H. M. Bean and completed by Cobb, Butler & Co. at Rockland, Maine. (Plate 51). The last of them afloat was the *Edward J. Lawrence*, burned at Portland, Maine, in December 1925. Contemporaneous with these nine was the *William L. Douglas* (3708 tons), built of steel in 1903 at the Fore River yard, Quincy, Mass., and wrecked in 1917.

On the west coast, six-masted schooners have been associated with our two world wars. The iron four-masted ship *Katherine*, formerly *County of Linlithgow*, built at Glasgow in 1887 (2296 tons, 286.9 x 43.5 x 24.1 feet) was refitted at San Francisco in 1919 as a tanker, with a bald-headed six-masted schooner rig having a yard on the foremast and twin screw oil engines instead of topmasts. She was still afloat a few years ago as the Greek *Frieda*, but with only five masts. In 1920 the *Oregon Fir* (Plate 52) and *Oregon Pine*, wooden Peninsula-type steamer hulls (2526 tons, 267 x 49.6 x 25.2 feet) built at Portland, Oregon, were given full six-masted schooner rigs, and later in 1920 the *Fort Laramie*, a Ferris-type hull launched the year before at North Bend, Oregon (2240 tons, 266.5 x 46 x 24.1 feet), was similarly rigged at San Francisco. The *Fort Laramie*, scrapped in 1935, was the last of the wooden trio to survive.

In 1941 two former gambling barges that had originally been four-masted barks were rerigged at Los Angeles as six-masted schooners. One, the *Star of Scotland*, has already been fully described in The American Neptune (I, 333; III, 266); the other (3102 tons, 335.5 x 46.9 x 26.5 feet) was built of steel at Port Glasgow in 1904 as the *Hans* of Hamburg

and has since borne the names *Mary Dollar* and *Tango*. In 1943 the *Daylight*, also built of steel at Port Glasgow in 1902 (3756 tons, 351.5 x 49.1 x 28.2 feet; she and her sister *Brilliant* the largest four-masted barks ever built), which had been idle as a barge on Puget Sound for many years, was rerigged as a six-masted schooner.

There have been only two six-masted barkentines. The first was the *Everett G. Griggs*, later *E. R. Sterling*, rigged at Seattle in 1906 from the dismasted German four-masted bark *Columbia*, originally the British iron four-masted ship *Lord Wolseley*, built at Belfast in 1883 (2577 tons, 308.2 x 42.9 x 25.1 feet). She was broken up in England in 1928 after again being dismasted. The other was the former iron Pacific Mail steamer *City of Sydney* (2903 tons, 339 x 40.2 x 20.5 feet), built at Chester, Pennsylvania, in 1875, rerigged at San Francisco in 1916, and scrapped there in 1930. (Plate 52).

During the career of the *E. R. Sterling* there were those who held that she was technically a schooner, not a barkentine, since she had no fidded fore-topmast (cf. Anderson, *The Sailing Ship*, p. 206). The history of the vessel (Lubbock, *The Downeasters*, p. 241) proves that her mizzen-mast as a ship was moved forward with its yards to make her new foremast —like many other square-riggers of her period she had lowers and topmasts in one piece—so that it was indeed a fully square-rigged mast and she was therefore unquestionably a barkentine.

JOHN LYMAN

The Later History of American Sailing-Ships 'Sold Foreign'

PART IX

Vessel built at Addison, Maine

Waverley. Barkentine, 320 tons, built 1860 at Addison, Maine.
Sold to France *c.* 1875 renamed *Ville de Lisbonne* [of Rouen]. No further record.

Vessel built at Alma, Maine

Elwood Cooper. Bark, 608 tons, built 1865 at Alma, Maine, by F. L. Carney.
Sold to Norway 1874 renamed *Agat* [HCNT of Moss]. Dismantled 1908.

Vessel built at Bucksport, Maine

Proteus. Bark, 662 tons, built 1867 at Bucksport, Maine, by W. H. Genn.
Sold to Sweden 1891 renamed *Nordstjernan* [HVFS of Hermosand]. Broken up 1912.

Vessel built at Castine, Maine

Castine. Ship, 962 tons, built 1857 at Castine, Maine, by J. Fisher.
Sold to Germany prev. 1886 [QDVK of Bremen]. Sold to Bermuda *c.* 1890 [of Hamilton]. In British Registry 1913, probably store-ship.

Vessel built at Columbia Falls, Maine

Marathon. Bark, 377 tons, built 1864 at Columbia Falls, Maine.
Sold to Ireland 1880 [of Belfast]. Abandoned at sea 10 May 1881.

Vessel built at Cumberland, Maine

Liberty. Bark, 281 tons, built 1857 at Cumberland, Maine.
Sold to Australia *c*, 1864, renamed *Adeline Burke* [TNKW of Melbourne]. Dismantled 1890.

Vessel built at Franklin, Maine

F. S. Means. Bark, 298 tons, built 1854 at Franklin, Maine.
Sold to Cape Colony 1864 renamed *Ansdell* [SCHN of Cape Town, later of Melbourne, Australia]. Afloat (hulk) 1913.

Vessel built at Georgetown, Maine

Mary E. Whittier. Bark, 530 tons, built 1851 at Georgetown, Maine.
Sold to Norway *c.* 1876 renamed *Caroline* [HLNP of Tönsberg]. Abandoned December 1893.

DANIEL R. BOLT

Documents

Stratford Canning on Shipping in America

Stratford Canning is generally acknowledged to be one of the very ablest and most sagacious British diplomatists of the nineteenth century or any other. His service as minister to the United States, from 1820 to 1823, was a kind of strange interlude between his masterful triumphs at Constantinople.[1] In America he concerned himself not alone with the routine responsibilities of diplomacy, but in studying material conditions and the state of the mechanical arts, naval construction in particular. His official biographer cites approvingly an American newspaper which described Canning as better informed on the United States than any of his predecessors.[2] The documents here printed are revealing both as evidence of the scrupulous care with which Canning reported what he had observed, and for the descriptions of the way in which ships were built in the 1820's.

Steam Boats[3]—It is peculiarly to this advantageous situation [of New York City] that the origin of the application of steam to propel vessels may be ascribed, and the success of the invention has been attended with such evident advantage that beside the steam frigate (to be described hereafter) no less than eleven others are working. Three of these go to Albany 160 miles distant in less than 24 hours. Two others ply between New York and Brunswick on the Rariton [*sic*] about 50 miles distant by water and reach their destination between the hours of seven in the morning and two in the afternoon. Two others pass through the Sound to New Haven in Connecticut at a similar rate of velocity. Others serve for the ferries. That on the North River crosses over to Pawles Hook in 25 to 30 minutes. Similar boats impelled by a wheel worked with twenty horses are on each river, but they are somewhat slower; by these means the activity of commerce is increased and the distance of place appears contracted.

Steam Frigate—Although the Fulton (first) or Steam ~~Navigation~~ [so it stands in the original] Frigate would not be employed for this purpose, this is the proper place to give some account of its structure and applicability.[4] According to information which I collected on board, she is 175 feet in length by 48 in breadth. Her sides up to the gun wall are five feet thick of solid oak. Her upper work appeared four feet thick. Upon her maindeck she is pierced with thirty ports four feet square, and armed with as many thirty-two pounders. The machinery of the engine and paddle is under the maindeck in the centre of the ship and I was assured by one officer her powers of velocity were equal to 140 horses and by another, 124 horses, which one pretended gave her 12 miles an hour and another only five, possibly these rates are both true, and that the difference depended

[1] Stanley Lane-Poole, *The Life of Stratford Canning* (London, 1888), I, 298-335; Elizabeth F. Malcolm-Smith, *The Life of Stratford Canning* (London, 1933), pp. 63-79.

[2] Lane-Poole, *op. cit.*, I, 335.

[3] Public Record Office MSS, Foreign Office, *Stratford Canning Papers*, 352/62. Notes made during a tour in 1822.

[4] This vessel, originally called *Demologos*, was built during the War of 1812 on designs made by Robert Fulton, in whose honor it was rechristened. Though hailed as the first steam-propelled warship ever built, it had, as Canning noted, sails for auxiliary purposes. Never tested in battle, the *Fulton* was destroyed by a mysterious explosion in 1829. Canning's description, which no doubt was intended for the British Admiralty, is much more thorough, and at points diverges from that contained in Frank M. Bennett, *The Steam Navy of the United States* (Pittsburgh, 1896), pp. 8-15.

upon the absence or presence of her stores and complement of men, with or against winds or tides. She draws eight feet [of] water and is provided with two rudders at each end and moves either way without veering. Three gun ports opened at each end, one between the two rudders and one on each side of them; by these means she presents three guns to the enemy whether chased or chasing. The main deck ports appeared about seven feet above the water, with the guns on board, but neither stores nor crew nor fuel. The height of the deck is above six feet clear of the beams. She is provided with two masts and with a bowsprit at each end. Her sails are two very large lateen sails, like those of the Mediterranean galleys: her upper deck is very spacious and clear of incumbrances, defended by a breastwork of cotton rags (soaked in water) for which purpose a double row of iron stanchions four feet asunder are placed round her sides, behind which 300 marines are intended to be posted, who together with 60 seamen and 240 artillerymen compose the full complement . . . without officers.

I have been likewise informed, that by means of a particular mechanism, the heated water from the boilers of the engine can be ejected in any given direction to repel boarders, but of this quality in the machinery the engineer made no mention; he however stated that a furnace was about to be arranged to heat shot while the same fire would act to force the steam. The son of the builder (a Mr. Watson) informed me, that the timber for three Ships of the line had been consumed in her construction and that she cost, if I remember right 500,000 Dollars, to which he added that from the little use she could be made of, it was probable the Country would never build another. The United States Navy officers seem all to object to her. Notwithstanding the formidable character of this new instrument of war, it is doubtful whether she would be found to answer an adequate purpose in case of actual trial. Red hot shot Congreve Rockets with sharp heads must expose her to the effect of ignition. Her bulk on the water is considerable, and the width and proximity of the ports must expose the men serving the guns to severe and rapid loss. Perhaps portable furnaces fixed on travelling carriages would readily enable an invading army to resist a vessel which is not calculated to venture out of the narrow waters and gun boats with coppered floors and furnaces might resist her in shoal waters where the weight of fire from line of battleships could not reach her.

* * * * *

The ship bldg at Phila—for a 74 is said to be of the largest dimensions ever built in any country and is calculated to carry 130 guns on three decks.[5]

She has a round stern on which is a battery of six guns on each deck. Her guns are all to be of the same caliber viz. 32 pounders, the lower and middle decks heavy guns, and the upper deck, cannonades or *Columbiads as they call them here.*

The general opinion here is that this ship is from her great size unfit for efficient service. After she is launched she must drop down to Chester or Newcastle to be equiped [*sic*] and after she is completed in her equipment the only ports in the U. S. she can enter are Portsmouth in New Hampshire and Newport in Rhode Island. She can come into the Hampton Road in Virginia, but cannot approach the Navy Yard at Gosport, on account of the Shoals off Sewell Point, Lamberts point or the narrows off Cranny Island.

There is also on the stocks here a frigate of very large dimensions.

A ship of the class formerly built called 74 is on the stocks at Portsmouth N. H. one at Boston and one at Gosport, Va. all of which have round sterns. This style

[5] This memorandum, bearing the date of 23 July 1823, was prepared just before Canning's departure for England. P.R.O. MSS, F.O. *Stratford Canning Papers*, 352/62.

of building is adopted universally by the Americans for their men of war.

There are now afloat 8 Sail of the Line, besides the *Chipewa* [*sic*] on Lake Ontario, and the 4 building when finished will complete the number voted by Congress, in all 12. Although they call their ships 74[s] the new class lately built and now building carry 102 Guns, at least they have that number of ports.

Contributed by Arthur J. May

To California in '49

[The following letter, owned by the contributor, was written by Edwin C. Drew of Brunswick, Maine, while en route to California in the Ship *Birmingham*.]

Ship Birmingham at sea
Monday March 24, 1850.
Long. 132° W Lat. 27° N.

Dear father and mother,

As we are now approaching the end of our voyage I will endeavor to give a slight account of the same and I will here make an excuse for my writing as my desk is my knee and the ship is pitching and rolling so bad that it is impossible to write steadily and again I shall be obliged to write fine and close in order to put in as much as possible. We left the wharf at Bath Friday, November 2d [1849] at 9¾ o'clock in the Ship *Birmingham*[1] with 23 passengers, Captain, 2 mates, 13 seamen, one steward and 2 cooks, and were towed to sea by the steam tow boat which left us about 12 o'clock and with it Alfred Perkins, Mrs. Jameson who had accompanied us thus far; it was with strong feelings that I took leave of them and then stood upon our deck looking at the land fast receding from our sight, thinking that in the course of events I might never see them again, but having a fine breeze from the N.W. we were soon upon the broad ocean and my attention was called to other matters.

I that day partook of a hearty dinner with the rest of the passengers after which I busied myself in various ways about the deck, being determined not to be seasick if I could posibly avoid it but it would not do and I was occasionly obliged to lean my head over the rail and go through sundry gymnastic exercises which to an 'old salt' would have been quite laughable, but as there was several others in the same situation and the rest expecting to be I came off quite well; at night I could not eat any supper and 'turned in' at an early hour.

Saturday, Nov. 3rd, Went on deck this morning feeling very sick and there I found some six or eight others in like circumstances, we had some gruel made for breakfast. The most of us forced some of it down, but with me, stay it would not and forced itself back by the same channel that it went. At noon and night I tried some broth but with no better sucefs so that I again 'turned in' feeling not remarkably bright.

Sunday, Nov. 4th I awoke this morning (after passing an almost sleepless night) and went up on deck. At breakfast time I tried some more gruel in which after several unsuccefsful attempts I kept a little in my stomach, then laid myself down on the hatches and remained the most of the days feeling too sick and weak to walk about or even sit upright. At this time we had a regularly constituted gruel party composed of from six to twelve persons, who had at each meal a pot of gruel made (with occasionally a little boiled rice) and brought out upon deck where each man that could eat

[1] Custom House Record, Bath, Maine.
Ship *Birmingham* built 1836
Length 129′ 10″ Breadth 29′ 3½″ Depth 14′ 7¾″
Tonnage 507
Description: Two decks, three masts, square stern, no galleries, a billet head.
First document issued: 1 November 1836.
Master: James Drummond
Owners: Gilbert Trufant, Gilbert C. Trufant, David C. Magoun, James Drummond of Bath; William Potter and Woodbury Potter of Georgetown, Maine.
Builder: Gilbert Trufant.
No plans, half model, paintings, contemporary drawings or other documents pertaining to this ship have been discovered to this date.

would take his bowl and seat himself upon deck where ever there was a chance and force down as much as pofsible. I was at this time the sickest man on board and thus remained until,

Thursday, Nov. 8th When I felt about used up, having lived on gruel and rice so long (but little of which I could keep down for an hour) that I now had quite a fever. This afternoon a marsh bird or snipe came on board the ship pretty well exhausted as they cannot alight on the water and the nearest land is the Western Islands distant about 700 miles. He was caught and fed by some of the pafsengers and remained on board an hour when he took leave of us.

Sunday, Nov. 11th Feel a little better, went on deck and found the sails nearly all 'clewed up' as we had a squall in the night. They were, however, soon shaken out to the breeze again, showery all day and up to this time I have worn an overcoat. Sat down to dinner in the cabin for the first time since we came out having always taken my gruel on deck for the very sight of the table would make me sick. The barometer has been falling all day which indicates heavy weather, and after supper I saw the captain looking at the western sky with a degree of anxiety and a little before dark the order was passed 'all hands aloft to shorten sail.' At the same time the lightening began to show itself in the west accompanied with distant thunder. Soon the storm burst upon us in all its fury, but everything had been stowed away except enough to keep steerage way on the ship and we were prepared to meet it. I will not undertake to describe a storm at sea for it has so often times been done. It must be witnessed to be known, the sky is black as ink, the lightening is much more vivid than on shore because unbroken by surrounding objects, the thunder more terrific and was accompanied in this case with powerful rain, it is to a landsman rather appauling. The ship which proved herself to be an excellent sea boat has in the meantime been 'hove to' under a trisail and spanker and in this condition we remained until,

Tuesday, Nov. 13th, Making no headway but all the time drifting to leeward, toward night we began to put on a little sail but there was such a heavy sea running that we could not much more than hold our own.

Thursday, Nov. 15th, I again sat at the table for the second time since coming out. I have now about done with being sick and have some appitite but I am very weak and the most pitiful looking object. I think if you could see me now as I am with my hair long, my face unshaven and about as thin as the last run of shad, that you would be loth to own me for a son.

Sunday, Nov. 18th Feel quite smart but have not yet recovered my strength, was able to read a little for the first time since I came out. A pleasant quiet day on board but no service and I have wished that I could just drop in somewhere and hear a good sermon, and thus it is we do not know how to appreciate blessings until we are deprived of them.

Thursday, Nov. 22d. This afternoon took N. E. trade winds which we have been anxiously expecting for several days as the wind has been rather light. Lat. 27° No. Long. 30° W. Lydia Ann can take her atlas and mark the points of latitude and longitude as I may occasionly give them and you can then see the course we have sailed.

Sunday, Nov. 25th Is a beautiful day, large quantities of flying fish are about the ship and one school of porpoise. There has not been (as I had reason to expect) any religious service on board the ship and I presume there will not be as I find there is no such disposition shown, and I also find Captain Winchell on shore and Captain at sea are two different persons.

Tuesday, Nov. 27th Fine day and a fair wind but not strong, this forenoon the mate harpooned a fish called Berni-

tia, about two feet long with a large round body striped and without scales which was fried for breakfast and tasted very much like veal; about 12 o'clock land was discovered on our lee bow or about S.E. but it was so far distant that it appeared to an unpracticed eye like a fog bank or cloud, all that we could discover was that it was very high; it proved to the Island of Fogo one of the Cape de Verde. After dinner the Island of Brava was discovered bearing about the same as the first. This is the most southwesterly of the Cape de Verde. About 4 o'clock we came up so that it was abeam distant 12 miles, it presented one dense mass of very course granite formed into small and large mountains running up in the center to a height of about 4000 feet. I examined it minutely with a glafs and could not discover a single tree, shrub, green thing, or a spot [of] earth; there was innumerable quanities of birds on and around it and barren as it appeared it was to us a pleasant and agreeable sight not having seen any land for 25 days. There are now three barques in sight to the westward of us, one of them is in full view, the others are hull down, or in other words nothing but the masts to be seen on account of the curviture of the sea. The one nearest us our captain thinks from her rig to be the Barque *America*, Capt. Grouse, that sailed from Bath 2 days before us. We are now in Lat. 14° N. Long. 24° 30′ W.

Thursday, Nov. 29th Thanksgiving Day and is with us very pleasant with a light wind and as the most of the passengers came from Maine we noticed the day by having a pair of turkeys made into a stew which with a flour duff or pudding made a very good dinner, but it does not seem like home, and I have wished that I could be at home for the day, not that I regret coming, not at all, for there was nothing else for me to do. I do not like the sea nor ever shall still I am not homesick and yet there are times when I feel that I should like to be there and see you all and some that I esteem as friends. This is the warmest day we have had, thermometer standing at 82°F. but as there is a cool breeze blowing all of the time so that we do not feel the heat as on land. This afternoon a canary came on board but could not be caught. We are now about 1300 miles from the Canary Islands. After supper as it was a beautiful night, a violin was brought out and we had dancing until 9 o'clock when most of the paſsengers went below, but it was so warm and pleasant that I remained on deck until 12:40 o'clock when after eating a red herring, a pickle and a piece of hard bread I 'turned in' and slept soundly, thus ended our Thanksgiving at sea.

Friday, Nov. 30th We are now 4 weeks out and have made a distance of 3300 miles, thermometer 88°F. and I now feel in hopes my cough will get well as it has been quite bothersome.

Sat. Dec. 1st Is a cloudy day and light wind, we had several severe showers last night and in order to have a good bath I took off my clothes went out and stood in the rain for which I feel much better. I was also fortunate enough to catch a pail full of water and I have been engaged in washing my clothes for half the forenoon, my wash consisted of one shirt, two pillow cases, three shirts, one pair drawer two pairs hose, two towels and two handkerchiefs which to be washed in one pail full of cold water reserving enough to put them in soak is rather more than you would like to do so at home but water is water here. A shark three and a half feet long was caught this afternoon, dressed and fried for, Sunday breakfast and tasted good.

I have noted down and intended to have given you an account of the petty tyranny practiced on board this ship by the captain and mate a regular upstart but since we have come out from Valpariso they have both been so much better natured and more accomodating than before that I shall refrain from doing so for the present. I could tell you a few things of the meanefs there is here which

you might be disposed to question from one in the habit of stretching stories. I had a bit of a blow up with the mate, did not speak to him for more than two months but at Valpariso he came to terms a little and I have since treated him as a man by the request and advice of some of the passengers. Captain Winchell has treated me well personally but I have seen the horns show themselves so often that I must say I am sadly disappointed in the man; as a seaman and navigator I think him unexceptional, he is a careful trusty man and I do not know of a captain that I should rather go to sea with so far as seamanship goes and that is as far I will at present say.

Monday Dec. 10th We crofsed the equator this morning in Long. 23° 30′ W. It was the intention to have crofsed in 20° W. and had accordingly run over as far as 18° W. when in Lat. 4° N. but the wind has been so far to the south that it has crowded us off to the westward, thermometer 84°F. This is the first day I have worn thin pants for I have not been too warm with thick ones and a coat in the evening. I am much disappointed in the weather, I had an idea that in this latitude it would be insufferably hot, but we have not had the thermometer above 88°F. and with a cool breeze.

Instead of having a first rate cook as was promised us we have one of the meanest kind, so bad that Bow who says he knows nothing about cooking has been put in charge of the galley, our steward knows nothing about his business and what is more he is too lazy to learn so that you can imagine we have some great dishes. Perhaps you would like to have our bill of fare. We have, Monday for dinner, boiled beef, potatoes and rice; Tuesday, boiled beans; Wednesday, boiled beef and potatoes; Thursday, boiled flour duff; Friday, stewed and baked beans; Saturday, boiled beef potatoes and rice; Sunday stewed chicken. For breakfast we have potatoes and beef with boiled mackeral once a week for supper we have soft bread and butter. We had some mince pies twice while our fresh beef lasted but that was whilst I was sick. We have had some molafses gingerbread once and some fried donuts once but these things have been stricken off the list by our captain as being too much of a luxury. They attempted to put us on allowance of two bisquits (and small ones at that) a piece for supper but they found that would not go down and we now have enough, they attempted to do the same with molafses but found there was too much drawn out of the barrel nights and they soon gave that up.

Friday, Dec. 14th We have now been out 42 days, Lat. 10°27′ S. Long. 27°24′ W. and we were agreeably surprised this afternoon to discover a sail ahead which was running down nearly for us, upon seeing which our yards were braced up studding sails taken in and the ship brought up two points so that we might speak her. Upon seeing such demonstrations on our part she bore down for us and on exchange of signals we were a little disappointed to find she was English and on coming near enough to speak both ships were 'thrown aback' and she proved to be the Ship *Emmigrant* of Liverpool from Callao to Cowes, England the captain of which promised to report us as soon as he arrived. Upon exchanging longitude both ships again filled and bore away. In one and a half hours she was out of sight, this is the first vessel we have spoken and is a matter of interest to us as there is a prospect of our being reported in the 'states.'

Thursday, Dec. 20th Went on deck this morning and found it raining hard together with a heavy sea, about 9 o'clock as it was still continued to rain hard we concluded to have a regular washing so the pafsengers brought out all the dirty clothes that had been accumulating, put on our oil cloth coats took off our shoes and stockings and went to it, as the deck was flooded with water our procefs was to lay them down soap

them well and then tread them until the dirt was out, then rinse them around a little and they were pronounced clean. As we had the whole deck for a wash tub this method was not to be laughed at and is a great saving to the hands. We are about 250 miles off Cape Frio the first land made on going into Rio de Janario where we now should have been if we had been going into that port and we have so far made a good pafsage being 48 days out and 55 days to Rio is a good pafsage; but I find I am journalizing too much and must therefore jump along. I will however give you and account of a bit of gale we had.

Saturday, Dec. 29th Is all sorts of a day but good and all kind of winds but fair; has rained all day and quite cold about like our November weather at home; wind fresh all day, about 5 o'clock P.M. had increased to a strong wind with every appearance of a hard night. Sail was gradually taken in at first but it soon came on to blow a gale. The same time it came on to rain in torrents and driven with such force as almost to blind one, as I was anxious to witnefs the storm I put on an oilcloth coat and went on deck where I found a very busy scene. An effort was being made to take in sail and with the wind blowing a gale, the rain pouring down in torrents the sea a perfect foam, the hoarse orders of the officers and almost inaudible response of the seamen, together with the anxious looks of the pafsengers as they were endeavoring to maintain an upright position by holding on to the ropes, was really an exciting scene. The sails were soon taken in without loss for everyone seeing the danger worked with a will, such of the pafsengers as could afsisted at the ropes on deck while the sailors were aloft, so that before dark we had everything in but spencer and close reefed spanker and the ship was 'hove to ride it out.' Thus from being covered with a cloud of canvafs we were in a few hours reduced to almost bare poles. I think a ship 'hove to' at sea with bare poles is about as desolate a thing as can be imagined. I remained on deck until 9½ o'clock when feeling sleepy I turned in, but the ship was pitching and rolling so bad that I could not sleep and again went on deck and found the wind had increased to a tempest and the rain continuing to fall with unabating fury. Anything in the shape of hats trunks and boots had gone down to leeward and lay piled up in the greatest of confusion. I remained on deck until 12 o'clock, the wind having increased so that it was now actually fearful every time the ship went down (which would seem to be her last) I could look up on either side and see the water towering up above and around us seeming to be anxious to swallow us up. I could compare our ship to nothing but a horse fettered struggling to be free. At one moment she would lay quivering on the top of some huge wave the next she would go down until the water would rush over her rail and from which it appeared she would never recover. The watch on deck stood in the waist of the ship and one of them stood looking over the rail to windward and when he saw a wave coming larger than the rest, would sing out 'now holer on boys', we would then brace our feet and hold on with both hands til the wave had passed. I again turned in but was aroused about 2 o'clock by an extra shock and a cry from some of the pafsengers. I immediately jumped out of my berth onto my trunk (as I had lain down with my clothes on) and found my feet in water. The sea had broken over and rushed into the cabin and was knocking things about at a great rate. Mr. Doliff who was standing in the door at the time the sea broke said the water came over the rail three feet. We soon succeeded in setting things aright and I again went out on deck and found the wind had some what abated and the moon was trying to look forth. It was about 2½ o'clock Sunday morning the sea was running so high that the yards nearly touched the water as the ship ca-

reened. The captain informed me that the gale was called a Pampero and one of the worst to be met with; Lat. 32° 17′ S. Long. 48° 10′ W., so that we have made but 12 miles south in the last 48 hours. About 4 o'clock Sunday afternoon wore ship stood off on the other tack N. by W.

About this time we made sail almost abeam to the S. and E. When first discovered nothing could be seen but the tops of her masts, but as she was coming down before the wind she neared us very fast. At 6 o'clock the captain made her out to be a barque and a whaleman. Within out 1½ miles distant we saw a boat lowered manned and pull towards us, although there was a heavy swell running at the time. Thinking she might be bound to the 'states' some of us hastened to write a few lines. I wrote one page with a pencil by which time the boat was alongside and the mate (an Indian) reported his ship as the *Elizabeth* Captain Vanders from Neponset, Mafs., last from Cape de Verdes, cruising in the Atlantic for whales. We gave him our letters which he promised to put on board the first vefsel he spoke bound for the 'states.' He remained on board a short time when after we had given him and his crew a host of books and papers and tracts he took his leave; not however, until we had contrived to smuggle into his boat two turkeys ready drefsed for in the gale of last night we had seven so much chilled as to make it neceſsary to kill them.

Wednesday, Jan. 2nd It is now two months since we came out and we came into sounding this morning for the first time. Lat. 37° 5′ S. 100 miles from land with a pleasant day and a fine wind carrying us along at ten and a half knots per hour.

I have all ready written an account of our paſsage around Cape Horn which you can see if you wish to as I have not room here to give it to you. We had an excellent paſsage being but 78 days.

We arrived in Valpariso Thursday February 7th, 97 days from Bath which is an excellent paſsage. I have written Charles a slight description of Valpariso so that I will say nothing about it. This letter may not be very interesting to you but it is all I have to write about unleſs I go into personalities for if I speak of our manner of living I shall be obliged to censure some persons more than I wish to do at present.

We left Valpariso Tuesday afternoon, next day took the S. E. trades and had the pleasantest time to the Equator that we have had since we came out. Crossed the Equator in Long. 110° W. Tuesday March 12th.

Thursday, March 14th Took the N. E. trade winds in Lat. 2° 45′ N. since which up to this date of this letter we have had the fastest sailing for the same length of time that we have had since we came out.

San Francisco, April 10th I have finnally arrived in California. We came in last Sunday in exactly five months sailing time from Bath. The rainy season was not over when we came in but now is and it is very warm, fine weather.

Wishing you all happiness and prosperity and that I may return to you with a pocket full of lumps.,

I remain yours

EDWIN

Contributed by F. Sheldon Drew.

Queries

56. Schooner Speedwell

This query concerns a curious old parchment document found recently in the United States Naval Academy Museum. It came to the Naval Academy in 1888 when the United States Naval Lyceum disbanded and presented its collections to the Naval Academy. This Lyceum was founded in 1833 and had its headquarters in the Brooklyn Navy Yard. The parchment is torn at the top and somewhat wrinkled, and its dimensions are approximately 9¼ inches by 14 inches.

The word 'curious' was used because the writer is unable to account for the signatures of President Thomas Jefferson and James Madison, Secretary of State, in the year 1817. The wording of the document is as follows:

By the President of the United States of America

Suffer the Schooner Speedwell of Marblehead Simon T. Williams master or commander, of the burthen of Ninety eight and 33/95th tons or thereabouts, mounted with no guns, navigated with Seven men

To Pass with her Company, Passengers, Goods and Merchandize, without any hinderance, seizure, or molestation: the said Schooner appearing, by good testimony, to belong to one or more of the Citizens of the United States; and to him or them only.

Given under my Hand and the Seal
Number of the United States of America the thirteenth day of March in the year of our Lord one thousand eight hundred and seventeen.

Th: Jefferson
By the President.
James Madison Secretary of State.

State of
District of

To all Persons whom these may concern. } Countersigned by

The explanation which first occured to the writer was that the person in the Department of State who prepared the document for the signatures of Jefferson and Madison had one of those mental quirks, and after having written in the date of the year as 'one thousand eight hundred and,' continued and for some unaccountable reason, followed the 'seven' with the 'teen.' Such an explanation seems unreasonable, as it is not likely that both officials would have placed their signatures to the document without noticing the date.

Captain Simon T. Williams, according to *Old Marblehead Sea Captains and Ships In Which They Sailed,* compiled by B. J. Lindsey (1915), p. 131, shows that Williams actually commanded the 68-ton Schooner *Speedwell* in 1817 and in no other year.

One other explanation seems possible, as it is noted that the document is not countersigned. In the early days of our history, it was usual for commissions, letters of marque, and similar documents to be signed in blank and sent to various officials who were given the authority to fill in the data above the signatures of the issuing authority, and it is probable that the document signed by Jefferson and Madison was signed some time between 1801 and 1809. But why should anyone wish to fill in the data with the date 1817?

There is still another possibility which occurs to the writer, and this is that the blank document signed by Jefferson and Madison came into the possession of Captain Williams in the year 1817 as a relic and that he or the members of his family filled in the data more in the nature of a pastime.

Can any of the readers of The American Neptune shed any light on this document?

H. A. BALDRIDGE
Captain, U.S.N. (ret.)

News

The Mariners' Museum

Newport News, Virginia. A special edition of one thousand copies of *The Ashley Book of Knots* has been issued as Museum Publication number 13. Aside from the binding, the volume is the same as the trade edition reviewed on pages 338-339 of this issue.

Naval Historical Foundation

Washington, D. C. In the course of the summer the Naval Historical Foundation tentatively formulated a twofold policy on publications: first, a series of facsimile reprints and second a series of hitherto unpublished works. Both will be confined to the history of the United States Navy and Merchant Marine, and the format of each will be high in quality and design. Prices are to be kept at a minimum consistent with the bookmaking, and all profits are to be used to extend the work of the Foundation.

The reprint series was inaugurated with the facsimile reproduction of the first printed document relating to the Navy, *Rules for the Regulation of the Navy of the United Colonies* (Philadelphia, 1775), only one original copy of which has been located. This publication has met with a very favorable reception from the membership and others. The Foundation hopes to follow this with facsimiles of other important pamphlets, charts, broadsides, and perhaps prints. Only those which, because of their rarity, are practically unobtainable will be reprinted.

The texts of original publications will be drawn from the manuscript collections in the Foundation's own library, and from those of its friends.

Peabody Museum Marine Associates

Salem, Massachusetts. At the 24 July 1944 meeting of the Associates, held at the Museum, the speaker was Edward Rowe Snow, whose recent book, *Great Storms and Famous Shipwrecks of the New England Coast,* is reviewed on pp. 337-338.

Notes on Contributors to The American Neptune

Captain W. R. Chaplin, one of the Elder Brethren of Trinity House, London, was in peace time commanding officer of the heroic *Jervis Bay.* Howard I. Chapelle, one of the Editors of the Neptune, has recently been promoted to the rank of Major in the Army of the United States. Cedric Ridgely-Nevitt, naval architect, is at present employed at the Cramp yard in Philadelphia.

Joanna C. Colcord is a member of the staff of the Russell Sage Foundation in New York.

Ida Leeson, Librarian of the Mitchell Library, Sydney, Australia, sends supplementary information to a recent Neptune article from the rich resources of that institution.

Arthur J. May is a member of the history department of the University of Rochester.

F. Sheldon Drew, an amateur model builder of Brockton, Massachusetts, contributes an account of his grandfather's voyage to California in '49.

Book Reviews

LAURIN HALL HEALY and LUIS KUTNER, *The Admiral* (Chicago: Ziff-Davis Publishing Co., 1944). 6″ x 9″, cloth. xiv + 338 pages, illustrated. $3.50.

The special interest of *The Admiral*—a biography of Admiral of the Navy George Dewey, with full treatment of his distinguished services in the Civil War and the Spanish-American War—lies in the wealth of source material not heretofore available to historians, upon which the authors have been able to draw covering the period immediately following the American naval victory at Manila Bay on 1 May 1898.

For several months thereafter the city of Manila remained in Spanish hands and Dewey's diplomatic skill was severely tested by the aggressive activities of a German admiral, obviously seeking a German foothold in the Philippines. The situation was further complicated by an insurrection of Filipinos against Spaniards ashore, having independence in view, by complete want of any defined American policy respecting future political status of the Philippine Islands and by the absence of any American military forces to support the weak American squadron so far from home.

Official reports covering this interlude are very scarce and incomplete. Dewey was apparently too busy for more than brief telegraphic dispatches. Even these could be sent only occasionally since he had cut the submarine cable out of Manila to prevent its use by the Spaniards. Relay through Hong Kong was only possible when a ship could be spared irregularly for the week's round voyage.

Dewey's diary and a narrative prepared under his direction in 1904 by Commander Nathan Sargent remain as the only comprehensive source material. But these have been unavailable for general reference because in the private possession of the Admiral's son. The authors of the biography under review have been very fortunate in their access for the first time to these valuable sources as well as to many other documents similarly held.

The book is more than a mere biography. It gives a setting to Admiral Dewey's naval career (1854-1917) by rather extensive treatment of contemporary general naval history, and even by a brief, impressionistic prelude starting with the Navy of the Revolution. Although accurate enough in its main themes this setting suffers in many details by an obvious unfamiliarity of the authors with maritime and naval matters and by reliance upon questionable sources.

EDWARD ROWE SNOW, *Great Storms and Famous Shipwrecks of the New England Coast.* (Boston, The Yankee Publishing Company, 1943). 5⅝″ x 9″, cloth. 338 pages, 46 illustrations. $4.00.

Not only the major storms that have swept over the shores of New England and shipwrecks resulting from them comprise this volume, but also important marine disasters which had their origin in faulty navigation, fire hazards and negligence of

one sort or another aboard ship. In this connection the title does not indicate the complete scope of the book. Such stirring tales as the author tells of the destructive blaze on the circus steamer *Royal Tar* off the Maine coast in 1836, the burning of Commodore Vanderbilt's *Lexington* in Long Island Sound four years later and the failure of the Boston and Savannah liner *City of Columbus* to stay in the channel above Martha's Vineyard on a clear night in 1884 are a few examples showing how human carelessness can be as much of a peril at sea as the action of wind and waves. What appears to be New England's worst but least known disaster, the sinking of the rotten-hulled Netherlands frigate *Erfprins* off Cape Cod in 1783 with 303 members of her crew, is brought to light from Dutch sources and is a real contribution to the regional record of marine tragedies. Two famous wrecks, indisputably connected with November storms, have caught the author's fancy and receive especially full and convincing treatment, that of the British man-of-war *Somerset* on the Peaked Hill Bars of Cape Cod during the American Revolution and the steamer *Portland* which went down with no survivors in the same general location in the gale of 1898. All the evidence about the loss of the *Portland* has been assembled, the theories of how and where she foundered evaluatd and the author's own sound conclusion drawn; yet much of the story is still a mystery and must so remain unless facts now concealed can be uncovered.

As a result of his searches embracing some 9200 wrecks and 650 storms in the period from 1630 to 1942 the author finds an average of three notable storms each year, a 'snorter' once in five years, a gale of still greater dimensions every quarter century and at hundred year intervals a disturbance of such terrifying force that it is chronicled as the storm of the century. Storms of the latter category struck New England in 1635, 1723, 1815 and 1938. For his accounts of the first three and the half-dozen or more other outstanding storms selected from inclusion down to the Minot's Light storm of 1851 the author owes a debt, properly recognized in the text and notes, to Perley's excellent *Historic Storms of New England* published more than half a century ago. The devastation caused by the 1938 hurricane exceeded by far that of any of its predecessors. Though handled more briefly than the reader might expect, the extent and character of the disaster are covered in concise and assuring detail. The volume should long have value as a popular reference. The short accounts arranged by geographical groups which identify the lesser storms, wrecks and rescues should appeal in particular to the student of local history and with the appended list of Maine shipwrecks point the way to further research in more restricted fields. Maps showing the sites of the principal disasters and wrecks are included and ample illustrations, ranging from reproductions of early prints to recent photographs by the author.

CLIFFORD W. ASHLEY, *The Ashley Book of Knots* (Garden City, N. Y.: Doubleday, Doran & Co., 1944) 8½″ x 11″, cloth. 620 pages, 8 plates, about 7000 illustrations. $7.50.

Unless aviation or plastics or a now unheard of industry developes something new in the art of using cordage, there should be no need for another book on knots. As far as the present and past uses of rope are concerned Mr. Ashley's book tells the

story from every conceivable viewpoint. First of all he has traced each knot (the word is used generically) from the beginning of the literature on seamanship. Next its uses by various trades ranging through the alphabet from *archer* to *yachtsman* are given. And finally the method of forming the approximately 3900 knots from a simple clove hitch to an intricate Buddhist priest's cord is told in what is almost a miracle of descriptive clarity. The use of drawings to illustrate the various steps is far superior to the reproduction of a single photograph of the finished knot. If the instructions are followed even the unpractised hand can tie successfully the most complicated of fancy knots. This the reviewer knows at first hand because the book has enabled him to tie knots which had eluded him for years despite personal instruction from a square rig bosun.

It is easy to see the book is a labor of love and it is easy to believe eleven years have gone into the writing of it, not to mention a background of sixty years of knot tying experience. The 7000 off drawings of knots, the quiet humor in both text and illustration, the amount of research and the skillful organization of the material that have gone into the making of the book are ample evidence of the author's affection for and his competency to handle the subject.

There is a good index, an excellent glossary, and a most exhaustive bibliography which includes not only such works as John Smith's *Sea Grammar* and William Bradys' *Kedge Anchor* but also Harry Houdini's *Magical Rope Ties and Escapres*, H. Le Blanc's *The Art of Tying the Cravat*, and Leland Locke's *Ancient Quipu*.

ALICE ROWE SNOW, *Log of a Sea Captain's Daughter With Adventures on Robinson Crusoe's Island* (Boston: Meador Publishing Company, 1944). 5¼" x 7¾", cloth. 108 pages, illustrated. $1.00.

Many readers of Miss Colcord's 'Domestic Life on American Sailing Ships' (THE AMERICAN NEPTUNE, II, 193-202) will welcome this charming account of the life of a teen-age girl on board ship in the eighties, which the author, Mrs. Edward S. Snow of Winthrop, Massachusetts, has prepared partly from her diary and partly from recollection. Mrs. Snow is the daughter of Captain Joshua N. Rowe, whose journal concerning the salvaging of the ship *Crystal Palace* (of which he was Second Officer in 1857-1858) has recently been published in the NEPTUNE (III, 314-326; IV, 31-44), and the mother of Edward Rowe Snow, whose book on storms and shipwrecks of the New England coast is reviewed on pp. 337-338 of the present issue. Thus without conscious intention or prearrangement the activities of three generations of a New England seafaring family have been described in a single volume of this journal.

In the winter of 1882-1883 Captain Rowe, after some years in business in Liverpool, accepted command of the English bark *Russell* and set sail for South America, accompanied by his wife and young daughter. For four years the *Russell* traded up and down the coast of Chile and Peru, and visited Juan Fernandez, the island home of Alexander Selkirk, the original Robinson Crusoe. To young Alice Rowe the *Russell* was simply a floating New England home of the most normal kind, but one which conveniently carried her to distant and magical surroundings, where wonderful adventures—which she appreciated to the full and illustrated in her journal—took place. Now a grandmother and no longer 'chained to the kitchen sink,' Mrs.

Snow has made these adventures permanent in a delightful addition to the scanty record of the long-past amphibious era of New England family life.

CRITCHELL RIMINGTON, *Fighting Fleets, A Survey of the Navies of the World, 1944 Edition* (New York: Dodd, Mead & Company, 1944). 6½" x 8½", cloth. xii+348 pages, 375 illustrations. $4.50.

With the present accelerated pace of new construction and the constant alterations to older ships to embody the results of combat experience, even official publications on naval vessels are usually partially obsolete before they leave the presses. Unofficial publications, which are hampered not only by this phenomenal speed but by the necessary restrictions of security, are in an even sorrier position as far as completeness and accuracy of data are concerned. Nevertheless Mr. Rimington has had the courage not only to bring out the third (and considerably augmented) annual edition of his *Fighting Fleets* – the first of which was reviewed briefly in THE AMERICAN NEPTUNE, II (1942), 352 – but to inaugurate a companion volume, *Merchant Fleets*. The Navy's Office of Public Relations and the U. S. Maritime Commission appear to have given both blessings and assistance, and numerous contributed articles by appropriate and competent hands add to the value of the surveys. In comparison with *Fighting Fleets*, where the illustrations are divided into chapters by combat types, the ships of *Merchant Fleets* somewhat lack organization. In both books the quality of the paper and the offset reproductions leave much to be desired, but the quantity of illustrations make them good value for the money. A third survey, *Sailing Fleets*, is in preparation.

LIEUTENANT COMMANDER H. M. DELANTY, U.S.N.R. (RET.), *Along the Waterfront* (Aberdeen, Washington: The Author, 1943). 5½" x 8", cloth. 109 pages, 11 illustrations.

The head of the Grays Harbor Stevedoring Company has set down some recollections of ships and waterfront life on the Pacific Northwest. The topics discussed range from an account of the origins and development of the wooden steam schooner to the story of how the schooner *Sophie Christenson* put to sea with the two-hole privy seat of the sailors' union hall dangling from her jib-boom.

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